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GUILLAUME BOUCHER

A FRENCH ARTIST AT THE COURT OF THE KHANS

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A FRENCH ARTIST AT THE
COURT OF THE KHANS

BY
LEONARDO OLSCHKI

*With ten illustrations
and a map of Asia*



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TO THE MEMORY
OF
PAUL PELLLOT

FOREWORD

This little book is devoted to a Parisian master who lived and worked in the first capital of the Mongolian empire at the epoch of the Khans Kuyuk (1246-1249) and Mangu (1250-1259), Genghis Khan's grandsons and successors. The activity of this artist in the cosmopolitan center of a dominion stretching from Korea to the Mediterranean reveals some characteristic aspects of Asiatic life and civilization in which Chinese traditions amalgamated with Byzantine and Western influence, Indo-Tibetan inspiration fell in with Mohammedan culture and the last ramifications of Asiatic Christianity merged in the pagan superstitions of an age-old autochthonous Shamanism.

Guillaume Boucher worked for the emperor and the princes of the Genghizide dynasty, as well as for the small Catholic community of the capital. The stylistic and ideological interpretation of his works throws new light on the arts and crafts of Asia at the culmination of the Tartar political expansion, when the primitive customs of a nomad society rapidly crystallized in a rigid feudal system dominated by Genghis Khan's political and social institutions.

Little is known of the arts and crafts in thirteenth-century Mongolia and nothing is left of the proud monuments erected by the Genghizide rulers of Asia in the dreary region of the Upper Orkhon river. But what is known of the French master and his works discloses enough of the artistic expressions of a civilization generally considered in its military and political aspects rather than in its cultural ambitions and attempts. This little contribution to the history of the arts and crafts

of Asia discloses a broad panorama of human activity and intercourse throughout the mediaeval world.

The author acknowledges with gratitude the generous hospitality granted an outsider in Asiatic studies by the Department of Oriental Languages of the University of California. The cordial welcome and friendly support given to his research work by the members of the department has been deeply appreciated as an eloquent expression of academic solidarity and scholarly coöperation.

CONTENTS

	PAGE
I. A CHRISTIAN ARTIST AT THE COURT OF THE KHANS IN MONGOLIA	1
II. MANGU KHAN'S MAGIC FOUNTAIN. DYNAS- TIC SYMBOLISM AND TECHNOLOGICAL PROB- LEMS AT THE COURT OF THE KHANS	45
III. APPENDIX. NOTES ON THE ILLUSTRATIONS..	107
ABBREVIATIONS USED IN FOOTNOTES.....	119
INDEX..	121

I. A CHRISTIAN ARTIST AT THE COURT OF THE KHANS IN MONGOLIA

1.

The first traveler who, in 1254, reached Karakorum, then the capital of the Mongolian empire, found there a small colony of people from Western Europe of which he soon became the spiritual head. The report of this intrepid and intelligent Franciscan missionary—Friar William of Rubruck—is the only source of our knowledge about this small Roman Catholic community exclusively composed of people in the service of the emperor Mangu Khan and the members of his family.¹

Curiously enough, most of those Westerners were Frenchmen. Since the friar himself was brought up in France and had come from the Near East to Mongolia with the blessing of St. Louis, he was in a position to report to the holy king, in a famous travel account, some authentic information about his fellow-countrymen and their life at the Khan's court. At the imperial winter camp, about a week's distance from the capital, he first met a woman from Metz in Lorraine, Paquette by name, who was one of the attendants of Mangu Khan's daughter Cirina and had married a "Ruthenian" artisan, probably from Russia.² In Karakorum the friar joined the rest of the colony, which included the nephew of a Norman bishop, a certain Basil who was

¹ P. Anastasius van den Wyngaert, *Sinica Franciscana*, Vol. I, Quaracchi (Florence), 1929 (referred to hereinafter as SF), pp. 147-332. William W. Rockhill, *The Journey of William of Rubruck to the Eastern Parts of the World*, London, Hakluyt Society, 1900 (hereinafter Rockhill).

² SF, p. 252; Rockhill, p. 176.

the son of an Englishman, and the Parisian goldsmith Guillaume Boucher.³ Boucher's wife was "a daughter of Lorraine, but born in Hungary," as the friar reports. They had an adoptive son "who was a most excellent interpreter."⁴ The whole company gathered "with great rejoicing" for a Palm Sunday dinner at the goldsmith's house, on April 5, 1254.

All these men and women had been taken prisoners in Belgrade by Mongolian leaders when the victorious armies of Batu Khan retired from Central Europe to Russia and inner Asia, in 1242, after the death of Ogudai, Genghis Khan's son and successor. At the epoch of the second invasion, which brought the Tartars up to Italy and Dalmatia, the old Roman and Byzantine stronghold of Belgrade belonged to the Hungarian kingdom of Bela IV and had become a center of Western civilization. The Hungarians themselves had little to contribute to it. Higher culture, courtly manners, literary interests were largely dominated by French influence.⁵ French was the language of the Hungarian court and nobility long before the Anjou dynasty succeeded the Arpads on St. Stephen's throne.⁶ Some of the highest ecclesiastical positions of the kingdom were held by French prelates, and the Latin bishop of Belgrade at the time of the Tartar conquest was a Norman from

³ SF, pp. 278-9; Rockhill, p. 211.

⁴ SF, p. 253; Rockhill, p. 177.

⁵ On French influence in Hungary in the Middle Ages cf. I. Kont, *Étude sur l'influence de la littérature française en Hongrie*, Paris, 1902, pp. 6-29.

⁶ Some curious and little known documents of the prestige of the French language in Hungary and Central Europe in the author's book *Paris nach den altfranzösischen nationalen Epen*, Heidelberg, 1913, pp. 289 ff; for the use of the French language in the Levant, Greece, Egypt and Persia cf. Col Sir Henry Yule, *The Book of Ser Marco Polo*, 2 vols., 3rd ed. (with a volume of *Addenda* by H. Cordier), London-New York, 1921 (hereinafter Yule, *The Book* etc.), I, Introduction, pp. 87-89.

Belleville, near Rouen.⁷ Even in the lower ranks of the clergy the French language must have been pretty familiar. When the first papal envoy arrived at the Mongolian court, in July 1246, he found there several Hungarian clerics "*scientes latinum et gallicum.*"⁸

The French ecclesiastical dignitaries and the representatives of the French monastic orders were followed by craftsmen who spread throughout Hungary the regional and individual varieties of the Gothic style in art and architecture.⁹ The French bishop of Belgrade continued in Eastern Europe the old tradition of the Norman prelates who inspired and kept busy the most enterprising architects and craftsmen during the first expansion of Romanesque art in Western Europe, England, Italy, Sicily and the Levant.¹⁰

At the epoch of the Tartar invasion Hungary was one of the many countries of Europe which acknowledged the prestige and accepted the supremacy of the contemporary French civilization. There is no reason to believe that only second- or third-rate masters and artisans accepted work in those distant outposts of French cultural and artistic expansion. The famous sketch book of Villard de Honnecourt reveals that even an artist who collaborated in the construction and decoration of the Cathedral of Reims settled down somewhere in Hungary for several years.¹¹ We have good

⁷ SF, p. 287; Rockhill, p. 223.

⁸ Johannes de Plano Carpini, *Ystoria Mongalorum*, Cap. IX, 39, SF, p. 123. There was a Latin speaking Coman from Hungary at the court of Batu, Khan of Kipchack (SF, p. 217; Rockhill, p. 127), and a Hungarian servant at the camp of Mangu Khan, the emperor, near Karakorum (SF, p. 245; Rockhill, p. 168).

⁹ Cf. L. Gâl, *L'architecture religieuse en Hongrie*, Paris, 1929.

¹⁰ Cf. the author's essay on "La cattedrale di Modena e il suo rilievo arturiano" in *Archivum Romanicum*, Vol. XIX, 1935, fasc. 2.

¹¹ Cf. Hans R. Hahnloser, *Villard de Honnecourt*, Wien, 1935.

reason to presume that Guillaume Boucher was no less skilled and versatile a master than his famous contemporary from the neighboring Picardy. The Mongolian leaders who captured him and took him to the empire's capital certainly knew that they had made a good catch.

Per contra, the history of medieval art pays little attention to his work. His activity, it is true, is known only indirectly through scanty or laconic information. No trace has been left of the works he produced for the Khan himself although a few of the objects manufactured for the small Catholic community of the capital may still exist in the Buddhistic temple of Erdeni Tso erected in the sixteenth century on the ruins of the town.¹² Nevertheless, we know more about Master William, the Parisian who lived for many years in innermost Asia, than about most of the mediaeval artists who never left their native countries. Even in a case so fortunate as the preservation of Villard's sketch book, this unique and authentic document is insufficient for tracing out the contributions of this master to the monuments in which he collaborated.

With regard to posterity Boucher is in a much better situation. He owes his immortality to an experienced and educated fellow-countryman who was able to appreciate his activity as an artist, his personality as a Christian and his ability in adjusting himself to the extraordinary environment in which he had to live and work. By coördinating the details scattered through Rubruck's report and by reading, so to say, between the lines, it is possible to describe the oldest example of coöperation between Western Europe and Eastern Asia in the field of the fine arts and in the spirit of the

¹² For the famous Buddhistic monastery of Erdeni Tso, cf. E. Bretschneider, *Mediaeval Researches from Eastern Asiatic Sources*, 2 vols., London, 1910, I, p. 122, note 304; also Yule, *The Book etc.*, I, p. 230.

mediaeval world. If considered in the Gothic framework of France's refined civilization and, on the other hand, against the turbulent, fluctuating and heterogeneous Mongolian society, the activity of Guillaume Boucher emerges from its secular oblivion as a surprisingly eloquent document of an eventful era and an adventurous life.

2.

Just as all other Europeans at the Tartar court, Boucher lived at Karakorum as a slave. He belonged to the household of Mangu Khan's brother Arik-Buga after having served for some years in the *ordu* of "Seroctan," the emperor's mother and widow of Genghis Khan's son Tului.¹³ The fact that only French people represented Western Europe in this imperial environment probably may be explained by the comparatively higher consideration in which the "Franks" were held by the Tartar rulers and dignitaries. Italy was known only as the country of the Pope, who had already sent his envoys to Mangu Khan's predecessor.¹⁴ The German prisoners had been sent to work in the iron mines of Tsungaria.¹⁵ But all the Tartar chieftains from Korea to Asia Minor knew of the French military and political expansion up to Egypt, Syria and the Latin empire of Byzance. Mangu Khan was well informed about St. Louis' undertakings in the Levant, and both sovereigns were aware of the fact that a common enemy,

¹³ On the name of this powerful lady cf. P. Pelliot, "Le vrai nom de Seroctan" in *T'oung Pao*, Vol. XXIX, 1932, pp. 43 ff. Also E. Blochet, *Introduction à l'Histoire des Mongols de Fadl Allah Rashid Ed-Din* (E. J. W. Gibb Memorial Series, Vol. XII), pp. 165 ff.

¹⁴ Cf. G. Soranzo, *Il Papato, l'Europa Cristiana e i Tartari*, Milano, 1930.

¹⁵ SF, p. 224; Rockhill, p. 137. The "Teutons" were also employed in other parts of Asia for digging gold and the manufacturing of arms.

the Saracens of the Middle East, separated the Mongols from the "Franks."¹⁶ In repeated embassies both parties sought mutual security through possible alliances or territorial conquests in the bordering Mohammedan countries. The "Franks" hoped to convert the Mongols and the Mongols claimed to extend their domination up to the end of the Western world.¹⁷

For these reasons the Tartars were always eager to get useful information about the "Franks" and showed some interest and clemency toward the few authentic Frenchmen they could put their hands on during their destructive sweep through Eastern and Central Europe. Besides, Master William certainly enjoyed unusual privileges among the other French prisoners because he was an artisan. We know from reliable reports that especially goldsmiths and good craftsmen were able to escape the terrible treatment inflicted by the Tartars upon all the peoples they subjugated and enslaved.¹⁸ This circumstance explains why only a few Europeans could survive their misery and get into inner Asia with their ruthless conquerors.

The Tartars always held metal workers in high esteem. There has always been very little and poor craftsmanship among the cattle-driving nomads of Central and Eastern Asia. They were skilled in working felt and leather, but the few wandering metal workers and silversmiths of Mongolia could not meet by far the demands of a society rapidly developing in wealth,

¹⁶ SF, p. 254; Rockhill, p. 180.

¹⁷ Eric Voegelin, "The Mongol Orders of Submission to European Powers" in *Byzantium*, Vol. XV, 1940-41, pp. 378-413

¹⁸ On the terrible conditions of the captives among the Mongols John of Pian del Carpine says that "they have little to eat, little to drink, and are miserably clad, unless they are able to make some money as may goldsmiths and other good artisans." Cf. SF, p. 92; Rockhill, p. 176 n. 3.

exigencies, refinement, influence and power.¹⁹ The leading classes of this mighty new society had to rely almost entirely upon forced labor and a more or less voluntary coöperation of the subjected peoples and the allied tribes. Well aware of the importance of the arts and crafts in the development of a new civilization, the founder of the Mongol dynasty decreed in his Institutions that each member of his family had to receive "a certain number of skilled workmen, artisans, artists and so on," while his own personal appanage included, besides his famous bodyguard of selected warriors, substantial settlements of workmen and artisans.²⁰

These people were organized in a hierarchy which included several ranks and grades with different classes of directors, superintendents, masters and subordinates.²¹ The details of this large administration are known only for a later epoch, but its characteristic features reveal Genghis Khan's organizing genius and the lasting value of his institutions. These artisans were a personal possession of the emperor or of a member of his dynasty, and their organization had merely a courtly character independent of political, racial or religious influences and of the general administration of financial, civil and foreign affairs. It is in this sense that Guillaume Boucher was first a slave of Tului Khan's widow and afterwards the personal property of Arik-Buga, the presumptive heir to the throne, only to become finally the chief artist and engineer at the emperor's court.

Most of the members of this imperial organization

¹⁹ On the structure and evolution of Mongolian society cf. B. Ya. Vladimirtsov, *Общественный Строй Монголов*, Leningrad, 1934.

²⁰ Cf. B. Ya. Vladimirtsov, *The Life of Chingis-Khan*, London, 1930, p. 148.

²¹ Cf. P. Pelliot, "Une ville musulmane dans la Chine du Nord sous les Mongols" in *Journal Asiatique*, Vol. CCXI, 1927, espec. pp. 266 and 269.

of artisans were foreigners. Their rank and treatment depended upon the value and rarity of the material they were able to work and upon the importance of the individual trade. It was probably because of their skill in working metals that the Alans of the Caucasus enjoyed a privileged situation as compared to the other Christian and Mohammedan populations around the Caspian Sea.²² They yielded to the conquerors when the invading Mongol armies and tribes pushed relentlessly toward Russia and the Black Sea and they provided the new rulers with cuirasses.²³ Iron plates and caps were imported also from Persia or manufactured by Christian workmen in the forges near the iron mines of Central and Eastern Asia. Armour of this type had been of little use in the mobile Tartar warfare, but was soon adopted by Mongolian military leaders and spread through Central Asia and China where large foreign colonies had settled down as soldiers and artisans.

Much of the glamor that made Genghis Khan a legendary hero since the beginning of his amazing career emanated from his original name of Temuchin, which means "best iron." In the Turkish form Timur this

²² Best firsthand information on the relations between the Alans of the Caucasus (also called Aas) and the Mongolians in John of Pian del Carpine's *Historia Mongalorum*, SF, pp. 71, 89 and *passim*, as well as in William of Rubruck's *Itinerarium*, *ibid.*, pp. 209 f., 318 etc. (Rockhill, pp. 54, 88 f., 117 f., 261 etc.). A short survey by R. Bleichsteiner, "Das Volk der Alanen" in *Berichte des Forschungs-Institutes für Ost und Orient*, Wien, Vol. II, 1918, pp. 4-16. More details by G. Altunian, *Die Mongolen in Kaukasischen Ländern*, Berlin, 1911; E. Bretschneider, *Mediaeval Researches*, II, pp. 84-90, and the article "Alania" in *Dictionnaire d'Histoire et Géographie Ecclesiastiques*, I, 1934-38. Rubruck's assertion that the Alans are good makers of armours and "excellent artisans" (SF, p. 318; Rockhill, p. 261) is confirmed by the Byzantine chronicler Chalkondylas, *de rebus turcicis*, Lib. IX, Migne, *Patrologia Graeca*, Vol. 159, col. 459. For the Alans in China cf. Yule, *The Book* etc., II, p. 179, note 2.

²³ SF and Rockhill, *loc. cit.*

name was borne by several members of the Tartar dynasty in China and the steel-hearted Timur-Lenk, the Tamerlane of the European legend. The Mongolian warriors who fought with bows and arrows against the ironclad armies of the West learned more and more how to appreciate the symbolism of Genghis Khan's legendary smithy. Moreover, they were impressed by the shining and colorful sight of a Christian army and soon tried to exchange their "most unfit and unwieldy" leather armour²⁴ for the more dignified and elegant equipment stripped off their victims on the battlefields of Hungary, Austria and Silesia.

This adaptation of the Tartar rulers to some external aspects of Western civilization is attested by Emperor Frederick II, who had a more realistic insight into Mongolian customs and manners than most of the contemporary Western rulers and prelates.²⁵ What we know about Boucher's activity at the Great Khan's court confirms the increasing interest of those Asiatic nomads in the achievements of European art and craftsmanship. Mongolian and Chinese authors and chroniclers did not pay much attention to the symptoms of a Western influence upon the courtly and aristocratic Yuan civilization. But what we can gather from the reports of the missionaries and Marco Polo clearly shows that the prestige of Europe among the Tartars was almost exclusively limited to the arts and crafts.

²⁴ *Ibid.*, p. 225, respectively p. 137, note 2. The Mongols exacted extensive tributes of iron from the subjugated peoples of Asia and Europe (*ibid.*, p. 168, respectively p. 47, note 4).

²⁵ Cf. the Emperor's letter to Henri III, King of England in Matthew's of Paris chronicle, *Monumenta Germaniae Historica*, Scriptores, XXVIII, p. 211, where the Tartars are said "de victorum spoliis Christianorum armis decentioribus elegantius muniuntur."

3.

It seems, however, that the West European influence was concentrated mainly in Karakorum and at the imperial court. It was represented mainly by the person and work of our Parisian goldsmith. Before Hulagu's conquest of Persia, in 1252, the capital was the only Mongolian settlement of an urban and stable type. The political and military centers in the western kingdom of Kiptchak along the Volga always maintained a nomadic and fluctuating character and harbored a strong Mohammedan population fanatically adverse to every Christian and European infiltration. In the Far East the Mongolian occupation of the almost inaccessible territories of Northern China still had a military character and the objective of watching over the tributary tribes and provinces. China was then so strictly separate from the Western world that the first "Latins" the emperor Kubilai ever saw were Marco Polo's father and uncle on their arrival at his residence in 1265.²⁶

Thus, in the middle of the thirteenth century, the only place in Asia where a European artisan could live and work was Karakorum, "the first city—as Marco Polo correctly states—that the Tartars possessed after they issued from their own country."²⁷ The creation of a political and administrative center during the progress of their military conquests was one of the most extraordinary and difficult tasks Genghis Khan and his successor Ogudai were confronted with. For the first time in their history the nomad warriors and hunters from

²⁶ Cf., the author's little book on *Marco Polo's Precursors*, Baltimore, Md., 1943, esp. pp. 81 f.

²⁷ Yule, *The Book etc.*, I, p. 226 ff. Marco Polo did not visit the ancient Mongolian capital, which was the residence of a provincial governor at the epoch of his travels in Asia (1275-1295). The Venetian traveler got reliable information about the town from Tartar sources.

Mongolia had to establish a capital and to organize a sort of civilized and orderly city-life with a resident imperial court, palaces, public and private buildings, walls, markets, temples of many religions, warehouses and shops to meet the needs of officials and a permanently resident population. Moreover, arrangements had to be made for the accommodation of the dignitaries, sovereigns, envoys from all over the world, for guests and newcomers incessantly streaming into the capital from all the provinces of the empire.²⁸

The transformation of Genghis' principal military camp on the upper course of the Orkhon River into an imperial metropolis was accomplished by the time of Ogudai's death, in 1241. But this was not brought about by Tartar hands and brains. The ruling Mongolian tribes hated every kind of stable settlement and despised all people living in it. To live in a fixed house they would have considered a perpetual imprisonment, and settling down in a walled city they would have resented as slavery. These deeply rooted sentiments and opinions explain the ferocity with which those nomad warriors destroyed all the urban centers of Asiatic civilization in Turkestan, Persia, Russia and the Christian metropolises of Eastern Europe, Poland and Hungary. A walled city was a symbol of bondage and barbarism. The foundation of a stable capital in an empire of tents had only a practical justification. For the rest it was a paradox and a problem.

The Mongolian tribes had no crafts to speak of, nor

²⁸ Substantial description of the town by Friar William (SF, p. 285 ff; Rockhill, pp. 220 f.) and Marco Polo (*loc. cit.*), with more details on buildings, situation and customs in different passages of Rubruck's report. For information from other sources cf. Bretschneider, *Mediaeval Researches*, I, p. 172, and P. Pelliot, "Note sur Karakorum" in *Journal Asiatique*, Vol. CCVI, 1925, p. 372 f.

did they have architects or workmen who had grown up in urban traditions and experiences. They knew neither the stonemason nor the bricklayer. Building materials, as stone and wood, were scarce. Even for the construction of tents and carts of unusually large dimensions they seem to have needed foreign coöperation.²⁹ From Marco Polo's description of the town he never visited, we gather that it was surrounded by a stony earthen rampart. Most of the buildings were of mud and plaster. The imperial residence was situated outside the city proper and surrounded by a high wall. It included the great palace and many other buildings "as long as barns,"³⁰ which served as storehouses for the Great Khan's provisions and treasures. These long, low halls and palaces betray the Chinese pattern after which they were built.

The resident civilian population seems to have been composed mainly of Chinese and Mohammedans who lived in separate sections of the town. The Mongols still preferred to use their "yurts" scattered around in the outskirts, probably south of the walls, in the direction opposite the imperial residence. This city of tents accentuated the foreign character of the town. Even the court moved continuously from the capital to camps and palaces in its outer surroundings. These regular changes of residence took place according to the seasons and perpetuated for a long time the nomadic traditions of the dynasty and the ruling classes. Thus the sedentary population of the capital was represented mainly by foreigners, a circumstance probably unique in world history. Commerce was in the hands of the Saracens in whose quarters were the markets. The

²⁹ William of Rubruck, SF, p. 253; Rockhill, p. 177 n. 1.

³⁰ *Ibid.*, p. 270, respect. p. 297.

Chinese were all artisans, "adept in all manners of crafts." But the mosques erected in the Mohammedan section of the town indicate that some craftsmanship was represented also among those Moslems of Mongolia. Besides, there were some high-ranking Mohammedan officials at the court.

The homogeneous character of the Chinese population of Karakorum proves that it was shifted as a whole, and probably by force, from Northern China to Mongolia for the special purpose of erecting and decorating the buildings of the imperial residence and administration.³¹ The shifting of large groups of people from one to another part of the Empire was the ordinary policy of the Tartar emperors. Genghis Khan transferred from Western Turkestan to Northern China the whole population of a Mohammedan town composed of artisans, engineers, architects, astronomers, physicians, gardeners and other people skilled in different trades and professions.³² When the first stable buildings were erected in the old military camp of Karakorum, especially after 1235, experts and laborers were concentrated in the

³¹ On the other hand, when preparing the conquest of the country of the Assassins, Persians and Bagdad, Mangu Khan transferred from China to Central Asia "a thousand families of men able to build engines of war, to throw naphtha and to discharge crossbows" (Cf. Rashid-ed-Din, *Histoire des Mongols* by E. Quatremère, Paris, 1830, I, p. 133). There were also important Chinese settlements in the principal towns all along the routes from Mongolia to Central and Western Asia (cf. Lieu Yeu's report of Hulagu's conquest of Persia in G. Pauthier's edition of *Le Livre de Marco Polo* [2 vols.], Paris, 1865, I, pp. cxxxiii et seq.). The traditions of Chinese craftsmanship were supported by the fact related by William of Rubruck (Rockhill, p. 156) that it was the custom of all sons of those "most excellent artisans" to follow the same trade as their fathers. This remark may be correct as far as the Chinese colonies in Mongolia were concerned, but it hardly applies to China proper, where the arts and crafts were in general not hereditary.

³² P. Pelliot, "Une ville musulmane" etc., *Journ. Asiat.*, Vol. CCXI, 1927, pp. 261-270.

capital from the conquered parts of Western and Eastern Asia. Tibetan craftsmen followed the incessant influx of lamas into Mongolia and the city of Karakorum. This capital soon became the most cosmopolitan center of the world.

The proportion between the different sections of its population at the epoch of Mangu Khan can be easily estimated. The Chinese and Tibetan elements prevailed by far because Friar William counted "twelve idol temples of different nations," two "mahummeries" and only one Christian church of the Nestorian rite, situated "at the extreme end of the city" near the gates of the imperial residence.³³ This church, described as "rather large and fine," had "its whole ceiling covered with a silken stuff interwoven with gold."³⁴ No large groups of Christians of the Greek rite seem to have settled down permanently in the capital. Those who lived in its environments were admitted only temporarily on special occasions, with no church or clergy for the care of souls.³⁵ The reason for this characteristic exclusion may be found in the fact that the Hungarians, Alans, Ruthenians, Georgians and Armenians who lived in those days in Mongolia were all soldiers or slaves.³⁶ Such people were always kept far from the urban centers of the empire because of the supposed demoralizing influence of city life. Since the early conquests of Genghis Khan this typical Mongolian policy was extended to foreign warriors serving in the imperial army. All Christians in Mongolia seem to have been badly treated

³³ Rubruck, SF, p. 286; Rockhill, p. 221.

³⁴ *Ibid.*, p. 279 resp. p. 213.

³⁵ SF, p. 280; Rockhill, p. 213. Friar William affirms that all Christians of Eastern rites living in Mongolia "had not seen the sacrament since their capture."

³⁶ SF, p. 281; Rockhill, p. 215.

by their masters. They told the friar that "they could not live without thieving."⁸⁷ On the other hand, the Tartar authorities knew that Hungarians and Alans excelled in their organized and enterprising brigandage, especially in the peripheral regions of the empire.⁸⁸

The privileged situation of the Nestorians among all the Christians of Asia under Mongolian domination depended upon the well-known fact that several female members of the imperial family and some highly situated dignitaries of the court belonged to that sect. Mangu Khan's chancellor, Bulgai by name, and a great friend of Master William, was one of those influential Nestorians who played an important part in Arik-Bouga's conspiracy against Kubilai after Mangu's death in 1259.⁸⁹ It was under his protection that the small

⁸⁷ *Ibid.* At the end of his stay at the capital Friar William distributed some money to "the poor Christians who were there, all of them having their eyes fixed upon us" (Rockhill, p. 253). Shortly before his departure, on the octave of Pentecost (June 7th, 1254), the friar baptized "three children of a poor German he had found there" (*ibid.*, p. 247). All these poor Christians were probably attracted to the capital by the presence of the friars.

⁸⁸ SF, p. 210; Rockhill, p. 117.

⁸⁹ SF, p. 245 n. 2. P. Pelliot ("Chrétiens d'Asie Centrale et d'Extrême Orient" in *T'oung Pao*, Vol. XV, 1914, p. 629) designated Bulgai as a Nestorian Kerait, P. van den Wyngaert (SF, *loc. cit.*) as a Kitayan. He supported the national Mongolian party against Kubilai, almost a Chinese sovereign in taste and education, and was executed, in 1264, after the latter's victory over his brother Arik-Buga and his followers. (A short survey of the events in M. Prawdin's book on *The Mongol Empire*, New York, 1940, esp. Ch. 18 and 19.) During Mangu Khan's rule Bulgai was the head of the department of internal affairs and finances and the emperor's chancellor. Judging from Mangu Khan's exigencies, Bulgai must have been an exceptional personality, comparable to his predecessor and coreligionist, the Uigur Cingai (cf. Rockhill, p. 230) and Genghis Khan's first chief judge Shigi Kutaku, who is said to have fulfilled his duties with exemplary virtue (cf. Vladimirtzov, *Cinghis Khan*, p. 72 f.). Like his famous predecessors, Bulgai was the only official entitled to pronounce a death sentence (SF, p. 262; Rockhill, p. 189). On Bulgai's name cf. Peter A. Boodberg, "Two notes on the

French and Catholic community of Karakorum could live in peace, if not in freedom and prosperity. The knowledge of Master William's activity in Karakorum will also reveal Bulgai's part in the religious and artistic life of the capital.

But, in general, this environment was not very inspiring for a Roman Catholic of French birth and education. The Nestorian clergy was hostile and suspicious toward those Western intruders who threatened to prejudice its religious authority and political influence at the Khan's court. On the other hand, the few Catholics at the capital and the Christians of Greek rite living in Mongolia refused to attend the services of those heretics, while Friar William of Rubruck declined to accept communion from the hands of a Nestorian prelate.⁴⁰ Religious peace was secured throughout the empire by the judicious policy of the Khans who granted all their peoples the most liberal freedom of worship. But the relations between the creeds and sects were tense, and particularly stiff and precarious among the Christian and Mohammedan groups.

4.

If the spiritual isolation of a Western Catholic was almost complete, the field of his artistic activity could not have been very extended or favorable. There is ample evidence of Chinese predominance in every branch of architecture and craftsmanship represented in the capital. It can be inferred from Rubruck's accurate description that the architectural plan and general arrangement of the imperial residence corresponded very

history of the Chinese Frontier" in *Harvard Journal of Asiatic Studies*, Vol. I, 1936, pp. 300 ff.

⁴⁰ SF, p. 280; Rockhill, p. 213.

closely with the "forbidden city" of Peking, destroyed by the Tartars, in 1215, when they conquered Northern China and dispossessed the ruling dynasty of the Kin.⁴¹ When Kubilai established his winter capital in the northern suburban section of Peking, in 1260, his residence was reconstructed after the same traditional model. Mangu Khan, a strong Mongolian nationalist, kept away from Chinese influence wherever he was able to do so, but he had to accept the accomplishments of his predecessors in the capital and the prestige of the richest tributary regions of his empire.

At Karakorum the palaces of the court and administration seem to have been built and decorated mainly by Chinese craftsmen.⁴² It is only in the surroundings of the capital that some specimens of Western Asiatic architecture, Byzantine craft and European art subsisted at Guillaume Boucher's time. At Kerchagan, a day's ride from the capital, Ogudai built a palace in Persian style where his successors used to pass much of their time.⁴³ The builder of that palace probably was a Mohammedan of Turkestan or Western Asia, as was the architect later appointed by Kubilai, in 1261, for the construction of his residence in Peking's outskirts.⁴⁴ At the *Sira Ordu*, the famous imperial camp near Karakorum, Friar John of Pian del Càrpine had already

⁴¹ SF, pp. 276, 279; Rockhill, pp. 207, 212. On the type and arrangement of a Mongolian imperial residence cf. C. N. Kates, "A new date for the origin of the Forbidden City" in *Harvard Journal of Asiatic Studies*, Vol. VII, 1943, pp. 180-202.

⁴² Rockhill, p. 177 n. 1.

⁴³ *Ibid.*, p. 223. On Kerchagan cf. H. H. Howorth, *History of the Mongols*, Vol. I, p. 158, where the different residences of Ogudai are mentioned and briefly described.

⁴⁴ Kates, *op. cit.*, p. 197. The name of Kubilai's first Peking architect has been handed down in the Chinese Annals of the Yüan Dynasty (*Yuan She*) in the form Yeh-hei-tieh-êrh.

seen, in 1246, the throne of Kuyuk Khan manufactured by a Ruthenian goldsmith called Cosmas, who also made the emperor's seal with an inscription supposed to have been in Mongol and Chinese characters.⁴⁵ But the throne was certainly a monument of Byzantine style as devised and executed by a Ruthenian artist.

Obviously, it is mainly in a Christian environment that some objects of Western origin and character can be found among the eclectic arts and crafts represented in mediaeval Mongolia. When Friar William of Rubruck arrived at the imperial camp near Karakorum, in December 1253, he found there an oratory of the Nestorian rite which was frequented on special occasions by the emperor, his family and the court. The missionary was impressed by the sight of "an altar right beautifully decked" whose most conspicuous ornament was "an image of the Savior, of the Blessed Virgin, of St. John the Baptist and of two angels, embroidered on a cloth of gold, the lines of the body and of the garments marked with pearls."⁴⁶ When Mangu Khan's first wife, accompanied by her children and ladies-in-waiting, entered the chapel on the octave of Epiphany for a solemn offering of incense, they touched the images with their right hand, "always kissing their hand after touching them." Evidently those colorful embroideries were not there only as an ornament. It is worth while to trace their story.

Long before Chaucer described those "Tartar cloths,"

*"Couched with perles, white and round and grete,"*⁴⁷

brocades of that kind had become the most favorite ornament of the Tartar princes and their tents and

⁴⁵ SF, p. 122; Rockhill, p. 26. For this inscription cf. below p. 50, n. 15.

⁴⁶ SF, p. 245 f.; Rockhill, p. 168.

⁴⁷ Canterbury Tales, *The Knightes Tale*, vv. 2160/61.

palaces, and consequently an object of intense trade activity in Central and Eastern Asia.⁴⁸ It is during the Mongolian epoch that pearled textiles are frequently mentioned in Chinese texts, especially as the stuff from which the official dresses were made.⁴⁹ But in spite of the common designation as "Tartar cloths" those tissues and embroideries were characteristic of Byzance and the Near East.⁵⁰ Since the early Byzantine epoch the pearled gold brocade was considered an attribute of imperial dignity and it is most probable that cloths of the kind described by our friar were especially used, even among the Tartars, for the decoration of imperial buildings and halls.⁵¹ That would explain the presence of a rich decoration of this kind and style in the Christian chapel of Mangu Khan's Mongolian winter camp.

Nevertheless, the embroidered sacred images on the oratory's altar are somehow surprising and puzzling. The Nestorians generally did not permit decoration of an iconographic character in their regular churches.⁵² Friar William never reported anything about sacred

⁴⁸ Cf. Paget Toynbee, "Tartar Cloths" in *Romania*, Vol. XXIX, 1900, pp. 559-564. There are hints at the intense trade in cloths of brocade in Genghis's *Institutions* (cf. Vladimirtsov, *The Life of Genghis Khan*, p. 94); B. Laufer, *Sino-Iranica*, Chicago 1919, pp. 488-502.

⁴⁹ P. Pelliot, "Une ville musulmane" etc., *Journ. Asiat.*, CCXI, 1927, p. 269 n. 1 and p. 278. The pearled brocades, called *na-she-she* by the Chinese, are mentioned as *nasich* (also *nac* and *nakhut*) by Marco Polo (cf. Yule, *The Book etc.*, I, pp. 63 and 65) and *nacchi* or *nachetti* by F. Balducci Pegolotti, the fourteenth-century Florentine commercial agent (Cf. his *Pratica della Mercatura*, ed. by A. Evans, Cambridge, Mass., 1936, p. 423).

⁵⁰ On pearled embroideries in Byzantine mosaics cf. Ch. R. Morey, *Mediaeval Art*, New York, 1942, p. 62 etc.

⁵¹ Louis de Farcy, *La Broderie du XIe Siècle jusqu'à nos jours*, Paris, 1890, gives many examples and documentary descriptions of the embroidered textiles of the thirteenth century, as well as of the so-called "broderie à histoire" and the "broderie à images" (pp. 35, 39, etc.).

⁵² Cf. P. van den Wyngaert, *SF*, p. 203 n. 1.

images preserved in the church of Karakorum or in the capital's Nestorian baptistry. Evidently he did not discover any decoration of that kind in those places he knew so well.⁵³ But the chapel in the imperial camp was not a consecrated church.⁵⁴ It was a tent unfit for the celebration of mass and mainly destined to propitiatory ceremonies which the friar was not allowed to attend to the end.⁵⁵ This particular character explains the gorgeous aspect of the chapel, so different from the generally sober and poor Nestorian churches of Asia. Its exceptional and uncanonical decoration may be explained by facts and conclusions other than those of an ecclesiastical and liturgical character.

Undoubtedly those sacred images were all of an authentic Christian making and provenance. Nothing of that kind was wrought within the boundaries of the Mongolian empire. The poor Caucasian communities of Greek rite did not produce the rich embroideries of that royal style and the Armenian church took its iconographic and artistic inspiration exclusively from

⁵³ The only ornament mentioned by the friar in his short description of the church was the silken stuff interwoven with gold which covered its ceiling (see above note 34). This decoration is quite unusual in the churches of Eastern Christianity. Nothing of this kind is known for the temples of the contemporary Asiatic religions. By draping the ceiling with a silken stuff the Nestorian priests of the capital probably wanted to give their substantial church the character of a tent.

⁵⁴ Friar William expressly states that the Nestorians "non celebrant missam in tentoriis sed in ecclesia stabili" (Cf. SF, p. 259). Mangu Khan refused to attend services in the church of Karakorum because "he understood that they carried the dead there" (cf. Rockhill, p. 213).

⁵⁵ SF, pp. 218 f.; Rockhill, p. 184. The ceremony consisted mainly in an incensement of the emperor's first wife on the octave of Epiphany. On the day of Epiphany a similar ceremony had taken place in the imperial tent for the emperor, because it was a day the Nestorian priests considered "for some reason" sacred (cf. SF, p. 256; Rockhill, p. 182). In doing so they continued the old Byzantine tradition of the imperial consecration on the day of Epiphany (6th of January).

Byzance. The Mongolian warriors might have found some pearly embroideries in the richest religious buildings of Russia and Rumania they despoiled and destroyed, but it is difficult to believe that the pagan Tartars or their Nestorian dignitaries had any interest in adorning the churches of Central and Eastern Asia with Biblical images and scenes stolen from the sanctuaries of conquered Europe. Apart from the fact that the rapacity of the Tartar hordes was directed toward more substantial objectives, it is not correct to interpret every aspect of the mediaeval Mongolian civilization in terms of war and booty.

That show-piece of Christian art and craftsmanship reached the imperial camp near Karakorum in a normal and peaceful way, as a gift sent to Kuyuk Khan, in 1249, by Saint Louis, king of France. It was delivered to the emperor's widow by the king's envoy André de Longjumeau, who arrived at the Mongolian court shortly after Kuyuk's death.⁵⁶ Joinville reports in his famous biography of Louis IX that when the king was in Cyprus, at the end of 1248, he received there a Tartar embassy, mainly composed of Nestorians or Armenians who deceptively informed him about the intention of the Great Khan and the Mongol princes to be converted and baptized.⁵⁷ It is difficult to establish whether the king and his counsellors became victims of some polite Oriental exaggerations or of their own wishful thinking. However it may be, the king decided to reward the Khan's pious intentions with a truly royal and appropriate gift.

⁵⁶ On this famous embassy cf. Rockhill, *Introduction*, pp. xviii *et seq.* and G. Soranzo, *Il Papato, l'Europa Cristiana e i Tartari*.

⁵⁷ Cf. Jean Sire de Joinville, *Histoire de Saint Louis*, publiée par N. Natalis de Wailly, Paris, 1874, pp. 75 ff., 259 ff.). English translation by Ivan Evans, Oxford, 1938, pp. 40 ff., 142 ff.).

It consisted, after Joinville's description, in a very costly tent-chapel of finest scarlet cloth; "and to incline them to our faith, he had had wrought for them in the chapel-hangings all our belief, the Annunciation by the Angel, the Nativity, the Baptism whereby God was baptized, and all the Passion and the Ascension and the coming of the Holy Ghost; chalices and books and all that is needed to sing mass."⁵⁸ At that time Cyprus was a feud of the French Lusignan dynasty and a flowering center of textile art specializing in embroideries and in the manufacture of gold thread for the brocade industry.⁵⁹ As to the style and technique, Cyprus was merely a branch of the Byzantine arts and crafts. Thus, in all probability, the fine embroideries William of Rubruck admired in the tent-chapel in the imperial camp were identical with the "hangings" described by Joinville as a work of Christian craftsmanship of the Levant executed under the supervision of the King of France.⁶⁰ The Mongolian Queen regent, Ogul Gaimish,

⁵⁸ Joinville, *op. cit.*, pp. 74 and 259 (I. Evans, pp. 40 and 74).

⁵⁹ O. von Falke, *Decorative Silks*, New York, 1922, p. 25; L. de Farcy, *op. cit.*, pp. 14 and 39 ("opus ciprense").

⁶⁰ Joinville, *loc. cit.*, uses the word *entaillées* for the images the king had had wrought in the chapel hangings. Generally that term is used in connection with sculptures on wood, metal and stone; but there is an example of "banieres . . . entaillées de mil manières, brosdées d'or, faites de soie" in Benoit de St. Maure's *Roman de Troie*, v. 1143 (cf. A. Tobler's *Altfranzösisches Wörterbuch* herausgegeben von Dr. E. Lommatzsch, Berlin, 1920, art. *brosder*). Most of the examples collected in this work show the use of *brosder* for the designation of gold embroideries, as for instance "drap brosdé a ore," "a or brosdé," etc.). The mediaeval term "draps entailleiz" designated the modern cut cloth or *appliqué* work. Cf. Yule, *The Book* etc., I, p. 392. Friar William uses the terms "brosdate sive bistratte" for the description of those images (SF, p. 245, par. 6). *Brosdate* is the latinized form of the Old French *brosdée* (cf. Du Cange, *Glossarium*, art. *brusdus*). As for *bistratte* there is no example of this word in a mediaeval text, no matter of what language. The term denotes a specific brownish color particularly used in French mediaeval miniatures and textiles.

accepted the gift as a token of the "Frances'" subjection to the Mongols and did not care very much about its religious significance. The Nestorian priests took it over without prejudice because of its political implications and used the chapel for the special courtly service of their rite.

A great silver cross with gems in the angles and in the center, an oil lamp with eight lights burning before the altar, together with many other implements completed the artistic decoration of the oratory.⁶¹ A gilded coach for the emperor and his first wife was brought in when Mangu Khan joined the Christian part of his family. In this environment the mighty emperor, who still liked to keep the tribal customs of his ancestors, appeared in a foreign framework no less distant from Mongolian traditions than Kubilai's Chinese court in Shangtu and Khanbalik. In Karakorum and its surroundings Byzance and Peking met in a still desultory display of ostentatious sumptuousness, with the presents of the King of France contributing as much to the prestige of his country as to that of the Christian religion.

The Nestorian clergy of the court and capital had to compete with the Buddhist, Lamaist and Taoist priests and monks of Mongolia in an impressive pageant of Oriental splendor. What we know about the temples of Karakorum with their colossal images of Buddha, the "beautifully gilt" statues of gods and saints, the tables bearing lamps and offerings, the big bells and flagstaves rising above the whole city, and the usual paraphernalia of Lamaist devotion prove the authority and fascination of the indigenous Asiatic creeds of India, Tibet and China.⁶² In spite of its noble and precious decoration

⁶¹ SF, p. 259; Rockhill, p. 185.

⁶² Rubruck's description of Buddhistic temples cf. SF, p. 226; Rock-

the Christian chapel, and even the church of Karakorum, could hardly be compared with the wealth and brilliancy of the showy, noisy, teeming temples of the Chinese and Tibetan sects. Even in the field of religion and art, Christian civilization had to woo the favor of the imperial family and court.

The three-storied stūpa which Mangu Khan erected in his capital shortly before he left for his conquest of China shows very definitely the direction of his religious and artistic preferences.⁶³ The Nestorians contributed to the development of the new Mongolian civilization mainly in the field of literary culture, especially through Uigur officials and scholars.⁶⁴ But with regard to spiritual refinement and artistic variety Buddhism contended successfully with Christian influence. The two trends counterbalanced each other as long as Karakorum remained the capital of the Tartar empire. When the imperial residence was transferred to Chinese territory, very little of Eastern Christian art could resist the power and seduction of the Chinese civilization. As for Gothic art and Western fashion, they had not even infiltrated into the Nestorian sanctuaries of Mongolia and the Far East, in spite of all the royal gifts and the pillaging expeditions of the Tartar hordes into the religious centers of Eastern Europe.

The attitude of the Nestorians of Mongolia toward

hill, p. 143. On Lamaist temples in Mongolia cf. Howorth, *op. cit.*, Part IV, pp. 159-168 and F. Lessing, "Some notes on the Architecture of temples in South Mongolia" in *China Arts and Handicrafts*, Peking, Vol. I, 1932, pp. 11-22 (only first part published).

⁶³ Cf. P. Pelliot, "Note sur Karakorum" in *Journal Asiatique*, CCVI, 1925, p. 372.

⁶⁴ On the Uigurs in Mongolian history and society cf. E. Bretschneider, *Mediaeval Researches*, I, pp. 256-263. Also, Vladimirtzov, *Cinghis Khan*, pp. 109 ff.

the Catholic altar furnishings is revealed by one characteristic and curious example. When Friar William visited Mangu Khan's second wife Cota, he noticed in her room "a silver chalice after our fashion, which had perhaps been stolen in some church of Hungary, and it was hung on the wall full of ashes, and on the ashes was a black stone; and these [Nestorian] priests never teach that such things are evil."⁶⁵ It is evident that in writing to his king "*de calicibus nostris*," he intended to point out that the communion-cup used by the emperor's wife for magic purposes was one of those objects of French style and provenance which existed in the thirteenth century in Hungary and fell into Tartar hands when they occupied and ravaged the country in their incessant quest for precious metals. The princess evidently appreciated the silver chalice only as a rare and fine work of foreign craftsmanship while the Nestorian priests of the court never thought of sacrilege when an object of the Catholic cult was used for the preservation of a magic stone. Saint Louis was certainly horrified when he learned from the friar's report the use made by the Khan's family of his sumptuous chapel and the other sacred objects fallen into Mongolian hands.

Mangu Khan and other Mongolian sovereigns, dignitaries and officials became acquainted with another characteristic branch of the arts and crafts of Gothic France. Friar William of Rubruck had carried with him some illuminated manuscripts all the way from King

⁶⁵ SF, p. 267; Rockhill, p. 195. The friar expressly points out that Cota was "an idol follower" (*ibid.*, p. 263 respect. p. 190). He could easily recognize the French origin of the chalice by its style and form, because the chalices used by the Nestorians of Karakorum were very large (cf. SF, p. 182; Rockhill, p. 215), as were all the chalices used in Eastern Christian churches (cf. on this purpose Joseph Braun, S. J., *Das Christliche Altargerät*, Munich, 1932, pp. 137-144).

Louis' camp in Palestine up to the Mongolian capital. Together with his sacred vestments and the utensils for the service these books were intended for the missionary's personal use. He had come to the Tartars of the lower Volga for a long stay because he believed that Sartach, the ruler of that country, was a Christian and would protect his mission for religious and political reasons. But soon after his arrival at Sartach's residence, and much to his regret, he had to disabuse his mind about the pretended conversion of the Mongolian chieftain.⁶⁶

Yet Sartach as well as many of his Nestorian and Mohammedan dignitaries, warriors and officials showed a keen interest in the friar's books which included the Latin Bible, a breviary, a missal, a copy of the *Libri Sententiarum* of Peter the Lombard, "the beautiful Psalter—as the friar says—which my lady the Queen had presented me with, and in which were right beautiful pictures," and other volumes "of which he was specially fond." Furthermore, there was an Arabian book, "worth thirty bezants," and a "versified Bible," that is, in all probability, one of those vernacular compilations of the historical books of the Scripture characteristic of French literature of the thirteenth century and profusely illustrated with colorful and shining miniatures.⁶⁷

None of those officials and warriors was able to read a line in these books, but there was much excitement about the pictures, so that the friar was deeply con-

⁶⁶ The delightfully written story of how Friar William lost some of his books and succeeded in saving the rest of them is told in ch. XV and XVI of his *Itinerary*, SF, pp. 200-205; Rockhill, pp. 101-107.

⁶⁷ On this branch of mediaeval French literature cf. the author's *Romanische Literaturen des Mittelalters*, Wildpark-Potsdam, 1928-30, pp. 148-152.

cerned about the possibility of losing the precious volumes he cherished so much. In fact he never got back the Arabic manuscript, the French Bible and the Psalter of the Queen, "on account of the gilded pictures in it." In extorting the precious volumes from the friar, both the Mohammedan and the Christians of Sartach's court got their due. They were attracted by the rich and colorful decoration which betrayed the rarity and value of the books. Sartach, the great-grandson of Genghis Khan, and his wife "took a good look" at the Psalter which was adorned with gold-ground miniatures typical of contemporary French art "*che alluminare è chiamata in Parisi*," as Dante says.⁶⁸ There can be no doubt that all those volumes of an edifying and theological character were masterpieces of the Parisian style of book illustration which had reached its culmination at the epoch of St. Louis. The few words used by the friar in describing them are sufficient to evoke the beautiful specimens of the same type and style still preserved in some European and American libraries.⁶⁹

But Mangu Khan himself and his court and family caught sight of only two books which the friar was able to carry on his long journey from the banks of the Volga to the capital. One was a Bible, the other a breviary, both illuminated and of a size so small that Friar William kept them in his bosom all the way and even when he visited the emperor.⁷⁰ In this case, also, we are able to recognize the characteristic type of those tiny portable books, minutely written in fine Gothic letters

⁶⁸ *Purgatorio* XI, 81. On Parisian miniatures of the epoch of Louis IX including the type described by Friar William, cf. G. Vitzthum von Eckstadt, *Die Pariser Miniaturenmalerei*, Leipzig, 1907.

⁶⁹ Pierpont Morgan Library, *Exhibition of Illuminated Manuscripts held at the New York Public Library, New York, 1933-34*, no. 51-58.

⁷⁰ Cf. SF, p. 259; Rockhill, p. 183

on extremely thin vellum and adorned with elegant initials and glittering miniatures. The Khan "made careful inquiries about the pictures, and what they meant" and looked a great deal at the Bible. Louis IX had already sent to Karakorum some liturgical books of the same kind and style, but nothing is known about their fate.⁷¹ They probably disappeared in the turmoil that followed the execution of Ogul Gaimish and her followers and officials, in 1252, after their conspiracy against Mangu Khan had been uncovered. However it may be, the mighty sovereign, completely illiterate, was no bibliophile and had little interest in Christian doctrines and liturgy. But in looking at those books the friar showed him, he seems to have been fascinated by the arts of the "Franks" he already appreciated in the decoration of his chapel and in the works of his able and versatile goldsmith Guillaume Boucher.

5.

Master William, the son of Laurent Boucher, was a native of Paris and had a brother still living there on the Grand Pont, the present Pont au Change.⁷² This little bit of biographical information handed down in the friar's report reveals some interesting details concerning the master's background and origin. He cer-

⁷¹ Philippe Couplet, S. J., apostolic procurator of China in the seventeenth century, found in the town of Ch'ang-chou, in the province of Chiang-su, a Latin Bible written in the thirteenth century, now preserved in the Biblioteca Mediceo-Laurenziana in Florence. Cf. A. C. Moule, *Christians in China before the year 1650*, London, 1930, p. 85, n. 15. This manuscript is still wrapped in Chinese yellow silk and probably belonged to one of the Franciscan missionaries who went to the Far East during the Yuan period.

⁷² SF, p. 253; Rockhill, p. 177. The version "super magnum pontum" instead of "pontem" in SF, *loc. cit.*, is certainly erroneous and probably a misprint.

tainly belonged to a family of professional Parisian artisans. Before the Grand Pont collapsed, in 1296, it was flanked, like the Ponte Vecchio in Florence, by the houses and shops of money-changers and goldsmiths.⁷³ At the northern end of the famous bridge was the principal meat market of the town and the meeting place of the powerful butchers' guild of Paris supposed to have been the cradle of the Capetian dynasty. The name of our artist indicates that his family belonged to the Parisian *boucherie*, so popular during the Middle Ages as the representative of the active, influential and enterprising bourgeoisie of the capital.⁷⁴

Although he is called an *aurifaber* in Rubruck's *Itinerary*, we know of no jewelry, trinkets or regalia that Guillaume Boucher ever manufactured for the emperor or his family. He certainly must have made such ornaments, for all the Tartar princes were very fond of jewels and precious stones of which they amassed fabulous quantities. But what we know about his activity at the Khan's capital concerns almost exclusively works of sculpture, artistic craftsmanship and engineering, with some production in the fields of the minor arts. Friar William mentioned mainly the objects made or finished during his short stay in Mon-

⁷³ Cf. the author's *Paris nach den altfranzösischen Nationalen Epen*, 1913, pp. 145-152.

⁷⁴ In Friar William's report the name of the Parisian master is handed down in the form "Buchier," generally spelled *bochier*, *bouchier* and *boucier* in Old French texts (cf. Tobler-Lommatzsch, *Altfranzösisches Wörterbuch*, col. 1018). The form Boucher had been adopted in the few works in which Master William is mentioned; for instance, Thieme-Becker, *Allgemeines Lexikon der Bildenden Künstler*, Art. "Boucher"; M. de Mély, "Comptes rendus des séances de l'année 1925," *Académie des Inscriptions et Belles Lettres*, Paris, 1925, p. 90 (a poor and substantially erroneous communication); Louis Bréhier, *L'Art Chrétien*, Paris, 1918, p. 276; II. Grousset, *Histoire de l'Extrême Orient*, Paris, 1929, I, p. 444, etc.

golia. Nevertheless, he was able to give an impressive idea of the skill, industry and versatility of the Parisian master.

Like all the artists of his time and type he seems to have been experienced in every branch of the mediaeval arts and crafts. There was no specialization in their creative field, and the workshop of a goldsmith represented in mediaeval France, as well as in Renaissance Italy, only a first step and a particular section of the activity of a productive artist. Most of the great painters, architects, engineers, technologists of the Italian Renaissance started their adventurous careers in a goldsmith's workshop and learned there the neat, exact, patient and minute technique of a refined craftsmanship which remained apparent even in the most daring and brilliant achievements of their genius. In this apprenticeship they only continued a tradition going back to the Middle Ages and fully evident in Master William's own production, which—on its part—corresponds in many essential aspects with that of his contemporary fellow-countryman Villard de Honnecourt.

Besides some architectural projects the sketch book of this famous artist shows the models for sculptures, reliefs, ornaments, machines, clocks and contrivances of different kinds which seem to have been also a part of Master William's activity in the capital of the Mongolian empire. For a few eventful years French artistic genius was able to link together Paris and Karakorum through some considerable manifestations of the same taste and skill. And although Friar William of Rubruck asserts that the Mongol's royal city "is not as big as the village of Saint Denis" near Paris and that the royal monastery there is ten times larger than the Khan's palace, nevertheless the activity of the French master was conspicuous both in the fields of religious

devotion and of courtly life. He had some little scholarship, the friar attested, "and conducted himself like a cleric."⁷⁵

It becomes apparent that the artist enjoyed the confidence of the emperor and his family. On the other hand, he became the intellectual head of a Christian clique composed of influential men, all inspired by the desire to baptize the emperor and to make of him a stronger support of the faith. The influential Christian minority at his court was mainly represented by the great chancellor Bulgai and some other Nestorian dignitaries. They were joined by a wandering Armenian adventurer who pretended to be a monk and a doctor and succeeded for a certain time in cheating the sovereign and his counsellors.⁷⁶ Master William was the only Catholic in this company of Christian propagandists before Friar William of Rubruck reached the capital together with his companion, the Minorite Bartholomew of Cremona.⁷⁷ The latter was permitted to settle down permanently at Karakorum because poor health prevented him from undertaking the return journey to Syria when Friar William left for the West, in August 1254.

Only these men from Europe were inspired by a sincere spirit of disinterested proselytism. But their efforts were nullified by the spreading of Taoism and Lamaism among the Mongolian population and especially in the spheres of the court and nobility. The

⁷⁵ SF, p. 281; Rockhill, p. 215.

⁷⁶ Cf. the author's article on "Medical Matters in Marco Polo's Description of the World" in *Essays in the History of Medicine presented to Prof. A. Castiglioni* (Supplements to the *Bulletin of the History of Medicine*, No. 3), Baltimore, Md., 1944, pp. 243-247.

⁷⁷ The two Minorites left the imperial camp on March 29, 1254, and reached the capital on April 5.

Mohammedans counteracted with a stubborn opposition against every apparent success of the Christians, who always remained a minority divided by sectarianism, doctrines and rites. The Nestorians were able to maintain their influence and prestige because they stuck to their tribal and regional traditions and accepted in their rites and practice many of the superstitions and conjuring tricks of Mongolian Shamanism and Tibetan Lamaism.⁷⁸ In spite of the insurmountable difference of doctrines, all the creeds of Central and Eastern Asia joined in certain external aspects and expressions of their beliefs and superstitions. Armenians and other Christians of the Greek rite, Jacobites, and members of the minor Eastern sects accommodated themselves rapidly to the religious fallacies of the Asiatic tribes and nations. In several characteristic cases the travelers from Western Europe were unable to differentiate among the single creeds of Asia. The sly Armenian monk was more successful in Christianizing the emperor during the four months of his stay at Mangu Khan's camp and capital than all the other Christians of the court in years. He simply dared to compete with the Mongolian diviners in magic juggleries and medical tricks.

The small Catholic community of Mongolia never made any concession to the indigenous customs and rites. Consequently its members remained spiritually isolated and in a state of defense against the subtle influence of so many militant and powerful religious groups. But the religious fervor of a Frenchman of the epoch of St. Louis could not be stopped by difficulties of this kind. With a little scholarship, an unwavering

⁷⁸ On Asiatic religions in thirteenth-century Mongolia cf. Howorth, *op. cit.*, Part IV, ch. 3.

confidence, tact and intelligence he exerted himself for his faith and church in the way all Latin laymen did at that time when traveling or living in Asia. The field of his missionary activity was very narrow because he was a layman and a slave. He could not have thought of baptizing the emperor or the members of his family as the Franciscan and the Armenian monks fancied doing. Thus, he centered his apostolic activity in the person of the great chancellor Bulgai, the Nestorian Kerait, who enjoyed the confidence of Mangu Khan and was the highest civilian officer of his court. But all the pious, tenacious and learned Parisian was able to achieve in the many years of his stay in the capital was to convince this powerful man not to eat meat on Friday.⁷⁹ No wonder that under these circumstances his religious and ecclesiastical field of artistic activity could not become very extended.

The first product of Boucher's workshop that Friar William caught sight of was "a beautiful crucifix, made in French style, with a silver image of the Christ fixed upon it."⁸⁰ There can be no doubt that it was one of those delicately worked Gothic crucifixes of the thirteenth century of which some fine specimens are still preserved in France and elsewhere. Nothing more can be said of its artistic value and peculiar character, but the story of this sacred object, briefly sketched by the friar, throws a revealing light upon the tense and hostile relations existing between the Christian sects of Mongolia under the enforced rules of religious peace and freedom.

The crucifix was brought to the imperial camp near Karakorum, toward the middle of Lent of 1254, by the

⁷⁹ SF, p. 261; Rockhill, p. 187.

⁸⁰ SF, p. 275 f; Rockhill, p. 207.

son of Master William and was to be delivered to Bulgai as a personal gift from the artist. Yet, much to our friar's chagrin and surprise, the crucifix was stolen by the Nestorian monks and priests who had followed the emperor and his family to his temporary residence. At first sight this incident may be recalled as a contribution to the criminal history of the Mongolian court, and it may appear particularly spicy because Bulgai, a sort of minister of internal affairs, was also the chief of the Mongolian police.⁸¹ Friar William of Rubruck contributed in a considerable way to a *Chronique Scandaleuse* of the Tartar court by telling episodes which no "Secret History of the Mongols" would have ever narrated. The theft of a silver crucifix in the emperor's closest environment was one of those petty events whose cryptic implications the friar was not able to catch.

In his deep irritation against the Nestorian sect William of Rubruck depicted its clergy as composed of liars, ignorants, drunkards, simoniacs and swindlers. He was perhaps right in his contemptuous judgment, but it is hard to believe that the monks and priests of the imperial camp could have dared to filch a silver crucifix destined for the most powerful co-religionist of the empire only because they were rapacious and professional simonists. The superstitious court of Mangu Khan was not a stage for roguish tricks of sacrilegious kind. The very reasons for that crime lie deep in the dim background of the religious and political intrigues of the court, of which the missionaries—closely watched

⁸¹ Bulgai is also called a "justiciarius" by Friar William (SF, p. 261), who tells how that high official condemns persons to death (Rockhill, p. 189), inquires into offenses against the usages of the court (*ibid.*, p. 192), examines all foreigners in the capital (pp. 168, 221), searches for emissaries of the Old Man of the Mountain supposed to want to kill the emperor (p. 222) and grants permits of residence in Mongolia (p. 261). For more details cf. above note 39.

as newcomers and temporary visitors—had little knowledge and no understanding at all.

After fourteen years spent among the Tartars Master William certainly knew that in sending a crucifix to Bulgai, he challenged the Nestorian clergy and revealed the chancellor's interest in Roman Catholicism far beyond his meatless Fridays. The crucifix was taboo among the Nestorians and for that very reason they suppressed a masterpiece of art and devotion created by the Parisian artist for the most powerful man in their community. The acceptance of that symbol by Bulgai implied a profession of faith detrimental to the sect and its clergy. The priests and monks of the court who inspired the sacrilegious theft knew very well that the whole affair would be hushed up, because not even the chief of the imperial police would dare to raise an open scandal on religious questions in the very center of the empire. Mangu Khan was a wise sovereign who knew that the internal peace of his immense territory could be secured and kept only by granting to all the creeds and sects of Asia the most liberal freedom of worship. Theological discussions, proselytism and conversions were tolerated and officially ignored, but capital punishment was inflicted upon every religious trouble-maker.

The aversion of the Nestorian Christians to the image of the crucified Christ was general and deeply rooted.⁸² The cross was worshipped by them everywhere as the

⁸² Cf. G. P. Badger, *The Nestorians and their Rituals*, 2 vols., London, 1852, especially II, pp. 132, 414. Also Rockhill, p. 104, note 3. Friar William asserts from his own experience that "the Armenians and Nestorians are ashamed to show the Christ fixed to the Cross" (SF, p. 264; Rockhill, p. 191). In doing so they perpetuated an attitude characteristic of early Christian art, which avoided representation of the crucifixion even in the scenes of the Passion. A typical example of this omission is the sixth-century mosaics of Sant'Apollinare Nuovo in Ravenna.

highest Christian symbol and it was sometimes revered also by the pagan Mongol potentates as an instrument of magic power.⁸³ In the doctrines of the Nestorians of the Far East, as expressed in the famous inscription of Hsi-an-fu, the cross represents the inaugurating act of the creation, determining the four cardinal points within which God gave shape to the world.⁸⁴ But according to the fundamental concepts of the sect, Christ suffered the crucifixion as a man, not as God. Consequently none of the Nestorian texts and documents ever mention Christ's death on the cross. For the same reason the image of Christ never appears on the hundreds of Nestorian crosses found everywhere throughout the Asiatic continent. Therefore, Friar William of Rubruck asserted that the Nestorians of Central Asia had a wrong idea of the Passion of the Lord and that they were even ashamed of it.⁸⁵ They certainly shared with many Oriental peoples the reluctance to associate the idea of God with the degrading torture of the crucifixion,

⁸³ SF, p. 265; Rockhill, p. 193 (The English translation of Rubruck's passage "in qua erat elevata imago Salvatoris" is incorrectly rendered by Rockhill as "on which was a raised image of the Savior." *Elevata* has the sense of *ablata*, i e., taken off). Odoric of Pordenone devotes a passage of his *Relatio* to the "reverentia quam Magnus Canis fecit sanctissimo signo crucis." Cf. SF, pp. 492 ff.; Yule-Cordier, *Cathay and the Way Thither*, New Edition, London, Hakluyt Society, Vol. II, 1913, p. 334; A. C. Moule, *Christians in China*, p. 246 f. For the different aspects of cross worshiping in the Far East, *ibid.*, pp. 78-84; also H. Bernard, S. J., *La découverte de Nestoriens Mongols aux Ordos, Tientsin*, 1935, pp. 48 (with perhaps debatable conclusions).

⁸⁴ This is the sense of the passage of the famous Nestorian inscription of Hsian-fu as translated by P. Y. Saeki, *The Nestorian Documents and Relics in China*, Tokyo, 1937, p. 53, saying: "Dividing the Cross, He (i.e., the Lord of the Universe) determined the four cardinal points" A. C. Moule's translation (*Christians in China*, p. 35) differs from Saeki's version, but it does not contradict the given interpretation of that important passage.

⁸⁵ SF, p. 203; Rockhill, p. 104.

and they succeeded in protecting their church from the scoffing of the unbelievers by suppressing every image or emblem of the Passion of Christ. Thus a fine work of Western sculpture could disappear under the very eyes of the chief of the imperial police with no authority able to punish the crime.

6.

Master William had already prepared his revenge. It seems that after his experience with the silver crucifix he confined himself to work in the religious field mainly for the small Catholic community of the court. The arrival of Friar William and his companion at the Khan's camp and capital stimulated his activity as a craftsman and artist. Easter was approaching and there was for the first time an opportunity to administer the communion after the Roman rite not only to the few Catholics on the spot but also for scores of Greeks of the region who were eager to take the sacrament from the hands of the Franciscan monk. For that purpose Master William made an iron to make wafers which were used in the Nestorian baptistery of the capital where the friar was allowed to celebrate mass for his flock during Passion Week.⁸⁶

How an instrument as unimportant as an iron for making wafers could arouse so much interest can be easily understood from the fact that the Nestorians used leavened bread for the perfecting of the Sacrament of the Lord's Body.⁸⁷ Therefore the unleavened bread

⁸⁶ *Ibid.*, p. 281 f., respectively p. 215.

⁸⁷ For the doctrines, rites and liturgy of the Nestorians cf. besides the works already mentioned the corresponding articles of the *Catholic Encyclopedia* and in Vacant-Mangenot's *Dictionnaire de Théologie Catholique*

became an especially expressive symbol of the Roman Church for the Catholic diaspora in Asia. Moreover, the Nestorians of Mongolia put into their Easter bread some grease instead of yeast, or else butter or sheep's-tail fat, using flour that was said to have been originally consecrated by the Lord and adding some ointment with which Mary Magdalen was said to have anointed His feet.⁸⁸ It was only by substituting for this wondrous cake a plain unleavened wafer that the divine sacrifice could be consummated after the rite of the Roman Church.

Henri Cordier reports that a French traveler who visited the region at the end of the last century found in the large Buddhist temple of Erdeni Tso an iron bearing a Latin cross which certainly is the instrument manufactured by William the Parisian in 1254.⁸⁹ This would be the first appearance of a Latin cross in Eastern Asia, where only the Greek form is represented in the many crosses excavated in all the centers of mediaeval Asiatic Christianity. This fact may explain the enthusiasm of the friar when they made "*hostias more nostro valde pulchras*." A bit of Western craftsmanship helped him to revive the religious spirit of the community and to protect the Roman ritual against heretical influence.

For the preservation of those consecrated wafers Master William made a silver pyx with cavities on both sides for their relics.⁹⁰ This object seems also to have been preserved in the famous monastery on the Upper Orkhon River erected in the sixteenth century on the ruins of Karakorum. What we know about that silver

(extensive bibliography). On mediaeval irons for wafers cf. Cabrol et Leclerc, *Dictionnaire d'Archéologie Chrétienne*, art. "Fer à Hosties."

⁸⁸ SF, p. 280; Rockhill, p. 214.

⁸⁹ Yule, *The Book etc.*, I, p. 280.

⁹⁰ SF, p. 282; Rockhill, p. 215.

box reveals that it is without example in Christian archaeology and a documentation of the artist's ingenuity. Generally the Eucharistic host is preserved in a ciborium while the relics of the communion are put into a separate box.⁹¹ The small number of parishioners of the non-existent church and the rarity of a Catholic communion in those distant parts prompted the Parisian master to combine the two receptacles by canonically separating the contents. In doing so, he really "*gessit se ut clericus*." Shortly afterward the friar had to carry, as he says, "the body of Christ in the box of Master William" to a sick Nestorian priest who wished to die with the comforts of the Church of Rome. This was one of the very few missionary successes the friar was able to achieve during his stay in Mongolia. It would have been impossible without the coöperation of our gold- silver- and ironsmith.

However, his silver box is only a minor accomplishment of his ability. Apart from its unconventional design it is interesting for its material. It was just during the thirteenth century that silver became the most used substitute for ivory and enameled copper in the production of pyxes and similar church implements. The French goldsmiths had specialized in this branch of craftsmanship already developed to the highest degree of perfection by the artists of Limoges. The decoration of the improvised church of Karakorum was up to date in style and material. It is doubtful whether the Nestorian clergy of Mongolia had its altar furniture manufactured in the country or in the capital. Most of it

⁹¹ Cf. the detailed description of the different kinds of pyxes, boxes, ciboria etc. by Joseph Braun, *Das Christliche Altargerät*, pp. 280 ff., 466 ff. The use of separate receptacles for the consecrated hosts and the oblates had been made compulsory by William of Blois, the French bishop of Worcester, England, in 1225.

was certainly imported from the Middle East where the sedentary communities of the sect could avail themselves of an old tradition of craft and trade.⁹²

Master William's most conspicuous monument of art and devotion was an image of the Blessed Virgin sculptured "after the French fashion" and protected by two hinged doors on which he "had sculptured the Gospel history right beautifully." Unfortunately the friar's description of this important work is vague and insufficient. We do not know where the image was placed, nor is it clear whether "the windows surrounding it" were the wings of a sculptured triptych or the doors closing a recess, a niche or a shrine. Nor is there any information about the material used by the artist. If it were a precious metal, the friar would not have failed to mention it. Thus it can be guessed that the master wrought his masterpiece either in stone or in wood. He might even have employed both. But it is reasonable to suppose that the object was intended as a portable altarpiece to be carried around when the court moved from the capital to the different camps and seasonal residences.

As to the details of the piece we only know that on its "windows" the scenes of the Gospel were executed in relief. It is, of course, useless to speculate about the episodes of the Gospel represented on those wings. The French masters of the thirteenth century had developed some iconographical topics especially connected with the cult of the Virgin which had reached its artistic, theological and literary climax just in those days in an

⁹² Friar William mentions a portable altar sent to the Nestorians of Karakorum by the patriarch of Bagdad, and consisting of a quadrangular skin to be used instead of a consecrated stone.

unsurpassed flowering of religious enthusiasm.⁹³ Thus, with the most elaborate of his known works Master William transplanted into the heart of the Mongolian empire the most characteristic expression of contemporary French devotion. For the first time the Gothic style of French sculpture in some of its typical aspects moved into innermost Asia.

But it can be presumed that this monument erected "*more gallicano*" to the glory of the Blessed Virgin materialized not only the religious sentiments of our pious and gallant master. As everything else he created in his Asiatic exile, this monument had a deeper significance which we are able now to recognize and to appreciate in its full purpose and interest. For the small French and Catholic community of Karakorum this image of the Virgin was also a challenging symbol of its faith. As is generally known, it is in the rejection of every form of Mariolatry that the Nestorians were irreconcilably separated from the other groups of Western and Eastern Christianity.⁹⁴ Even those Nestorian prelates who went to Rome during the thirteenth century with sincere intentions of Christian fraternity never could overcome their reluctance to accept and even to discuss the cult of the Virgin as an essential expression of Christian devotion. This attitude not only depended upon an Oriental stubbornness in keeping old traditions, but it is explained by the fundamental principles of the Nestorian doctrines.

Since the epoch of Nestorius the question of the Virgin *Theotokos* involved all the Christological subtleties of the sect. In the same way that the Nestorians of Central

⁹³ Cf. E. Mâle, *L'art religieux en France au XIII^e siècle*, Paris, 1925, pp. 232-267.

⁹⁴ Cf. the literature mentioned above, note 87.

and Eastern Asia had accepted the cross as their highest symbol without admitting a crucifix on it, thus they might have accepted an image of the Virgin as an ornament of an oratory without ever worshiping Her as the mother of God.⁹⁵ In the tense atmosphere of Karakorum all these theological and ecclesiastical details assumed an exceptional importance which did not escape the attention of the people involved. The image sculptured by Master William represented much more than a similar statue erected in any Gothic cathedral of thirteenth-century France. The inquisitive Buddhists of the capital might have discovered in that image the feminine hypostasis of the Bodhisattva Avalokiteśvara worshiped in China under the name of Kuan-yin.⁹⁶ The suspicious Nestorians interpreted it as the most eloquent expression of the Roman faith. For the small but passionate Catholic community this French-made image represented the native country of most of its members and the most touching manifestation of their devotion.

Evidently Master William acted as a lay brother in this small community without church and clergy. The whole religious life of these Westerners was concentrated in his person and activity. Mindful of the needs of his fellow-believers "he had also made an oratory on a cart, finely decorated with sacred scenes."⁹⁷ This is certainly the most extraordinary document of the master's resourcefulness and piety. This movable chapel in which

⁹⁵ No cult but due honor was rendered by the Nestorians to the Virgin who is mentioned as the mother of the "Sage" in the inscription of Hsian-fu. Cf. Saeki, *op. cit.*, p. 55; A. C. Moule, *Christians in China*, p. 36 f.

⁹⁶ Cf. (especially for the iconographic material) M. Stiassny, "Einiges zur Buddhistischen Madonna" in *Jahrbuch für Asiatische Kunst*, I, 1924, pp. 12 ff.

⁹⁷ SF and Rockhill, *loc. cit.*

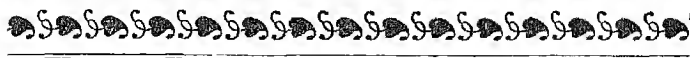
the few Roman Catholics could say their prayers was not fit for regular divine service. In fact, on Holy Thursday, 1254, Friar William of Rubruck celebrated mass in the Nestorian baptistery, provided with an altar and an antemensium, which had been put at his disposal by the Nestorian clergy for that purpose.⁹⁸ The oratory on the cart had no consecrated altar and only some decorative pictures. It was intended for the private devotion of very few people. Deprived of a regular church and of pastoral assistance these people had to find comfort and inspiration in some works of art which represented in a style both national and personal the familiar symbols of their faith.

The idea of a chapel on wheels was certainly suggested by the circumstance that the small Roman Catholic community of the capital was composed of people more or less connected with the usages of the court and consequently obliged to accept and follow the roving life of their masters.⁹⁹ The emperor and the nobility of "all the generations that live in felt tents" always avoided giving the impression of becoming sedentary. For the nomads of the steppes a prolonged or definitive settledness meant subjection, weakness, decadence. Every tent of a Mongolian camp had its carts in proportion to the owner's household and rank. Now a chapel-cart for Catholic devotion was added to the innumerable vehicles following the imperial wagon. It represented a modest counterpart to the rich Nestorian oratory of the camp near the capital, and was certainly built on one of the characteristic traveling Mongolian

⁹⁸ *Ibid.*

⁹⁹ Joinville (*op. cit.*, p. 267) reports that in the Tartar imperial camp there were eight hundred chapels on carts, one of the many fabulous or exaggerated details told King Louis IX by his envoy Andrew of Longjumeau (cf. Rockhill, p. xxxi).

carts roofed with waterproof felt and drawn by oxen or camels. Those exiles who had to accept the nomadic customs of their pagan masters at least had a familiar place in which to pray without soliciting the hospitality of heretics and making concessions to their rites and doctrines.



II. MANGU KHAN'S MAGIC FOUNTAIN. DYNASTIC SYMBOLISM AND TECHNO- LOGICAL PROBLEMS AT THE COURT OF THE KHANS

1.

The activity of Guillaume Boucher in the field of religious art showed the Parisian master as a gold-silver- and ironsmith, as a sculptor, a painter, an architect and a carriage builder. There cannot be any greater variety in individual craftsmanship. He even made the vestments the friar wore when officiating during the Easter holidays.¹ So diversified a production would not have been possible without the assistance of skilled artisans and contributions by men specialized in the different fields of handiercraft.

In fact, when telling about the iron for the wafers and the statue of the Blessed Virgin, Friar William used the expression *fieri fecit*,² which generally implies an order or commission, and frequently appears on monuments, sculptures and documents of the Middle Ages.³ As to the paintings in the movable oratory, they were expressly designated as a work of the master's own hand. In any case, Boucher could devote only his spare time to his religious works. Mangu Khan did not appoint the Parisian master merely to provide his foreign slaves with church and altar furniture. The emperor kept him busy for a long time with a work so important that fifty workmen were needed for carrying out the masterpiece

¹ SE, p. 281; Rockhill, p. 215.

² *Ibid.*, loc. cit.

³ Mostly in the form FF.

of art and engineering intended to become the most conspicuous ornament of the royal residence at Karakorum.⁴

It may be assumed that some of these men coöperated also in executing the objects already described. In any case Friar William's report attests the existence of an important workshop directed by a Frenchman in a town where at the same time Chinese, Tibetan and Moham-medan craftsmanship was conspicuously represented. With Boucher's fifty workmen and the direct protection of the emperor that workshop was certainly one of the most remarkable institutions of the capital, something that might be thought of as Temuchin's legendary smithy transformed into a small arsenal of cosmopolitan character. It indeed represents the first known and most impressive example of the peaceful glory of the Khan, it is true, but not without some devout side glances toward heaven.

We know of no other Christian artisans resident at Karakorum. Friar William would not have failed to mention their presence in the capital or their participation in its artistic, cultural, religious or public life. Some foreign silver- or ironsmiths might have come to Karakorum from the camps of Mongolia in order to work for the court or even in Master William's workshop. But the contributions of those craftsmen would have been confined to some manual and accessorial handicraft with no direct participation in the artistic creation and decorative refinement of his masterpiece. In the secular field of his activity Boucher could have accepted the collaboration of "idolaters" and Moham-medans, that is, of people from China, Turkestan and Western Asia, without burdening his Christian conscience with religious scruples.

⁴SF, p. 253, Rockhill, p. 215.

In fact, all the works of devotion he created for his Catholic community bore the mark of the purest French style, with no concession made to the Asiatic environment in which he lived for so many years. But in working for the emperor, he adjusted himself to the artistic and cultural eclecticism of the Mongolian court and was able to comply with the ambitions of the Genghizide dynasty only by combining the experiences of the European arts and crafts with the traditions and customs of Central and Eastern Asia. Just as the Chinese and Persian architects who built the imperial residence and some country seats in different parts of Mongolia, the French master had to adapt himself to the requirements of the new empire, the court etiquette, the strange Tartar habits and finally the whims and orders of his powerful boss. For this purpose he needed the active collaboration of skilled Asiatic artisans. It is an interesting task and an instructive undertaking to find out the contributions of the different traditions of art, religion and craftsmanship in Boucher's masterpiece as described with many essential details in Rubruck's reliable report.

Among the buildings erected by Ogudai Khan in the imperial precinct of the capital there was a large reception hall called *Wang an* by the Chinese and still designated as "a fine palace" by Marco Polo's informants.⁵ According to the friar's description the hall was "like a church, with a middle nave, and two sides beyond two rows of pillars, and with three doors to the south."⁶ The pure Chinese plan and style of the building were recognized long ago as closely resembling

⁵ Yule, *The Book etc.*, I, pp. 226-230.

⁶ SF, p. 277; Rockhill, p. 209.

the audience pavilions of the "forbidden city" and other modern Chinese residences.⁷ In smaller proportions the hall certainly corresponded with Peking's *Ta-ming-tien*, the "Hall of Great Brightness," in which—after Marco Polo's statement—six thousand people could easily dine.⁸ By comparing the actual palaces in the imperial residence of Peking with the friar's description of the hall of Karakorum, it is still possible to understand why the latter produced the impression of a mediaeval Christian church.⁹ (Plate 2.)

Palaces of that kind were built and organized for the celebration of the principal dynastic and religious feasts and for the solemn assemblies of sovereigns, feudatories and dignitaries which took place at fixed dates according to the seasons and holidays. This main reception hall was indeed the very center of the empire and the place where the emperors made an almost public display of their power, wealth and glory. At Karakorum this sort of *courts plenières*, so characteristic of mediaeval courtly life in Peking, Byzance and Paris, took place at least twice a year, in springtime and fall, when envoys, vassals and tributaries converged at the capital "even when distant two months' journey."¹⁰ On those occasions Mangu Khan sat on his throne *quasi unus deus* with the princes of his family to the right and the ladies to the left. The emperor and his relatives sat on a lofty platform situated at the northern end of the hall. From there Mangu Khan looked down on the

⁷ Rockhill, p. 210.

⁸ Yule, *The Book etc.*, I, p. 364 and n. 8.

⁹ Cf. O. Sirén, *The Imperial Palaces of Peking*, 2 vols., Paris-Brussels, 1926. For the palaces preceding those of the Yuan dynasty cf. C. H. Kates, *Origins of the Forbidden City*, quoted above n. 41. Still fundamental E. Bretschneider, *Recherches Archéologiques et Historiques sur Pékin etc.*, Paris, 1879 (English edition: Shanghai, 1876).

¹⁰ Rockhill, p. 207.

throng of nobles, warriors and officials sitting or standing around in the great hall according to their rank and dignity.¹¹ The details of those receptions were regulated by an elaborate etiquette which in some parts corresponds with the Chinese directions for the ceremonial under the Mongolian dynasty.¹² The climax of the proceedings was the famous *K'otow*, so impressively described by Marco Polo and consisting in four prostrations of the whole company followed by the adoration, benediction and incensement of the emperor.¹³

For a better appreciation of Boucher's cultural environment it is interesting to know that this form of mass demonstrations of submission and devotion seems to have been introduced into the Chinese ceremonial by the Mongols, who probably took it over from Western Asiatic or Byzantine rather than Far Eastern traditions. The adoration of the emperor as a divinity, with a "high prelate" reciting the blessing and the whole audience prostrated or genuflected, appears to be much closer to the Byzantine proskynesis and epiphany than to any form of authentic Chinese sovereign worship before the Mongolian era. However it may be, this sort of apotheosis introduced by the Tartar leaders substantiated in an impressive and colorful fashion the device adopted by Genghis and all his successors proclaiming "God in heaven and the Khagan on earth as the two rulers of the universe."¹⁴

¹¹ SF, p. 277; Rockhill, p. 209 f.

¹² Cf. the French translation of this section of the *Yuan She* (Chinese Imperial Annals of the Mongolian epoch, 1261-1368) in M. G. Pauthier, *Le Livre de Marco Polo* etc., I, pp. 291-296.

¹³ Yule, *The Book* etc., I, pp. 390 ff. and n. 4. The *K'otow* was abolished by the Ming dynasty which succeeded the Yuan, in 1368, and was reintroduced by the Manchus (1644).

¹⁴ Rockhill, p. 249.

With this profession accordingly inscribed in the imperial seal and always repeated in messages sent to Western sovereigns and the popes, the Tartar emperors considered every foreign king as a vassal and all the territories not yet conquered by their armies as actual or potential tributaries of the empire.¹⁵ This idea of universal domination, formerly unknown in Mongolian expansion, developed as a consequence of the Tartar conquests in East and West. But it was probably due to the steady and determined Nestorian influence that the Mongols introduced, into their primitive Shamanism, together with some Chinese religious practice, also the Christian concept of one God, the creator of all things visible and invisible.¹⁶ The idea of a personified and intelligent supreme being, emphatically proclaimed by Mangu Khan himself, is in open contrast with the basic conceptions of Buddhism and far from the religious traditions of the Tartar tribes.¹⁷ The emperor's idea

¹⁵ Cf. Mangu Khan's letter to King Louis of France in SF, pp. 307-9; Rockhill, pp. 248-51. Also P. Pelliot, "Les Mongols et la Papauté," in *Revue de l'Orient Chrétien*, Vol. 24, 1924, espec. pp. 315-21; E. Voegelin, *The Mongol Orders of Submission* etc. (see above p. 6, n. 17) and G. Soranzo, *Il Papato, l'Europa Cristiana e i Tartari*. Mandeville's *Travels* (Ch. LXX) made the writing about the Khan's seal popular, in the form "Deus in Caelo et Caene super Terram eius fortitudo omnium hominum imperatoris sigillum," which corresponds with the wording of Kuyuk Khan's seal as described by Friar John of Pian del Càrpine (cf. Rockhill, p. 26, n. 2). But the forger of Mandeville's famous book of travels only reproduced the text of Haitum's *Fleur des Histoires de la Terre d'Orient*, written by Nicolas Falcon, in 1307, under the direct inspiration of the Armenian prince. For this passage, cf. *Recueil des Historiens des Croisades*, Documents Arméniens, Vol. II, Paris 1906, p. 148. Also H. Omont, in *Notices et Extraits des Manuscrits de la Bibliothèque Nationale*, Tome XXXVIII, Paris, 1903, p. 275. On the Mongolian seals, cf. P. Pelliot in *T'oung Pao*, Vol. XXVII, 1930, p. 36.

¹⁶ Cf. Rockhill's note, *op. cit.*, p. 236.

¹⁷ The idea existed in Chinese philosophy independently from Christian influences, but it is doubtful whether the refined spiritual doctrines of some isolated Chinese thinkers were able to transform the Mongolian and

of many faiths worshipping one God in heaven with different rites and doctrines, is politically inspired and extends into the spiritual domain the feudal structure of Genghis Khan's universal empire. He conceived of the Biblical God or of the personified Eternal Heaven as a supreme chief of an invisible divine hierarchy reflecting the scale of power and dignity represented by his imperial organization.¹⁸

The meticulous Mongolian court etiquette was based on this parallelism between divine and imperial power and it combined in its rules and rites all the traditional superstitions of Asiatic Shamanism with the familiar customs of the Mongolian tribes. The hall of Karakorum was a temple devoted to the universal cult of the emperor. According to Mongolian traditions and especially to an inveterate national vice, the principal function of those solemn congregations consisted in extensive libations in which the whole assembly joined

popular Chinese concept of the Eternal Heaven (mong *móngke tengri*) into an imperial philosophy like that expressed in the profession and ritual of the Mongolian emperors. As a matter of fact, Mangu Khan, Kubilai and his successors inclined more and more toward Buddhism, and it is difficult to understand how they were able to reconcile the Biblical monotheism of the Nestorians, on the one hand, with popular Chinese cults and, on the other hand, with the Buddhist doctrines. (Cf. the remarks of R. Grousset, *Histoire de l'Extrême Orient*, Paris, 1929, Vol. I, p. 443, n. 1.) Mangu Khan—Friar William says—believes in none of them (Rockhill, p. 182), but there is no doubt that the emperor had a deeper interest in religious questions than had all his predecessors. In discussing the idea of God as a supreme being, Friar William and the representatives of the Asiatic religions came to hard blows, with the speedy repatriation of the missionary as an immediate consequence (cf. SF, pp. 294-7; Rockhill, pp. 230-5).

¹⁸ Cf. B. Ya. Vladimirtsov, *Общественный Строй Монголов*, pp. 87-121. The idea had been clearly expressed to Friar William by a lama at Karakorum, who proved the existence of many gods by saying: "Are there not great lords in your country, and is not this Mangu Khan a greater lord? So it is of them, for they are different in different regions." Cf. SF, p. 295; Rockhill, p. 233.

with a loud flourish of different musical instruments. In those ceremonial carousals there is some evidence of their original magic or propitiatory implications, and the details of their ritual reveal the intention of giving a dignified form and an orderly development to the courtly practice of drinking beyond the thirst.

The use and abuse of intoxicating drinks was one of the most characteristic aspects of Mongolian life, and apparently still is. In spite of Genghis' attempts to restrain the bibacity of his vassals and subjects the Great Khans and all the Tartar chieftains impersonated this national habit in a manner corresponding with their power and dignity. Ogudai Khan was a hard drinker, imitated in this fondness for intoxicating beverages by all his successors. Mangu Khan perpetuated the family tradition by tippling all the day round and on every occasion of his courtly and domestic life. Drinking was a matter of routine even in Christian churches and private audiences, and Friar William of Rubruck also had to taste some "clear and flavored" rice wine when paying his respects to the emperor. The audience lasted only a few minutes, because the Khan was already tipsy when it started and the interpreter became drunk after a few draughts.¹⁰

Kubilai transferred this custom to China and in spite of his constitutional gout went on drinking all his life. As a loyal servant of his master, Marco Polo never mentioned those characteristic drinking bouts of the court which showed the bibacious emperor and many of his dignitaries and guests fuddled by their extensive and promiscuous quaffing of different wines and liquors. A spectacle of that kind would have been considered barbarous and repulsive by Marco Polo's fellow-countrymen.

¹⁰ SF, pp. 240-51; Rockhill, pp. 173-5.

In describing only what he considered the bright aspects of Tartar civilization in China, the Venetian traveler acted as a propagandist for the conquerors he had faithfully served for seventeen years and he sketched a picture of their accomplishments and customs which suited the taste and impressed the imagination of his Mediterranean contemporaries.

It is mainly through the reports of the Franciscan missionaries that we become acquainted with the details of the Mongolian ceremonial which played an important part in Guillaume Boucher's activity at the court of the Khans. Likewise, we owe to the Spanish ambassador Ruy Gonzales de Clavijo our detailed knowledge of the survival of those typical Mongolian bacchanals in Tamerlane's Mohammedan environment where "wine was abundantly served to the mighty concourse of guests" at the frequent festivals organized in his sumptuous city of tents near Samarkand.²⁰ At that time the country of Omar Khayyám, the tent-maker and of Hafiz, the king of poets, had been under Mongolian domination for more than a hundred and fifty years. During all that time wine was in many parts of Asia an instrument of political power as well as an incentive of poetical inspiration. Although the founder of the second Central Asiatic Mongol dynasty no longer spoke the Mongolian language and professed himself a follower of the Prophet, nevertheless he faithfully stuck to a practice and etiquette developed almost two centuries before in the imperial camps and residences of the Far East. His huge pavilion was surrounded by a great number of jars big enough to contain about sixty gallons of wine each.²¹

²⁰ Cf. Clavijo, *Embassy to Tamerlane* (1403-1406) translated from the Spanish by G. Le Strange, London, 1928 (*The Broadway Travellers*), pp. 245 ff. and *passim*.

²¹ *Ibid.*, p. 253.

In the interior of the imperial tent "round and about and notably in the presence of his Highness they had stood on the ground as many as three hundred wine jars . . . and further there were two tripods made of wooden staves painted red, and hung on each was a great leathern sack that was filled with cream and mare's milk. . . . Indeed that they might be overtaken the sooner to enjoy drunkenness the guests were served with spirits as well as wine . . . and when they left the feast besotted drunk his Highness remained in his tent in a state of much cheerfulness and contentment."²² As for the ladies of the court, they deemed it a sign of manliness for one to get tipsy by gulping down considerable quantities of wine and fermented mare's milk because "at none of their feasts do they consider hilarity is attained unless many guests are properly in drink."²³ No wonder that Tamerlane's first wife "scarcely could be brought to believe and understand that the Spanish ambassador never did drink wine." One hundred and fifty years earlier Friar William of Rubruck and his companion soberly attended a solemn ceremony in the Christian chapel of the imperial camp in Mongolia where they had to join the bibacious Nestorian priests in singing with a loud voice when Mangu Khan's first wife Cotota Khatun wanted to drink until she got on her cart as tipsy as the rest of the attendance.²⁴

In spite of that barbarous intemperance the drinking bouts of the Tartar court maintained a certain dignified

²² *Ibid.*, p. 267. As to the two leathern sacks with mare's milk, mentioned by the Spanish ambassador, a passage of the *Yuan She* devoted to Genghis Khan's biography reveals the great importance attributed to them in the early etiquette of the Mongolian court. Cf. F. E. A. Krause, *Cingis Han, Die Geschichte seines Lebens nach den Chinesischen Reichsannalen*, Heidelberg, 1922, p. 14.

²³ Clavijo, *op. cit.*, p. 247.

²⁴ SF, p. 260; Rockhill, p. 186.

discipline enforced by the strict rules of a circumstantial and significant etiquette. The intention of performing a sort of a social rite was certainly instrumental in elaborating and realizing the complicated ceremonial connected with those political, military and feudal conventions. The blessing of the emperor's cup by the priests of all religions represented at the court was an act of usual routine on all the holidays celebrated with festivals and gatherings.²⁵ At Karakorum those ceremonies took place in the hall already described, with the cupbearer occupying the place of honor immediately below the imperial throne.²⁶ He carried the cup to the Khan by ascending one of the two rows of steps leading to him and coming down by the other. In that form the Mongolian Khans still perpetuated a very old Asiatic custom handed down in the Biblical description of Belshazzar's great feast when the king drank wine before a thousand of his lords and "commanded to bring the golden and silver vessels . . . that the king and his lords, his consorts and his concubines might drink in them."²⁷

For a society educated by shamans and accustomed to get religious inspiration from people deranged by

²⁵ *Ibid.*, p. 250, respectively p. 182. The Christian priests came first, followed by the Saracens and finally by "the priests of the idols," i.e., the Buddhists and Lamas.

²⁶ *Ibid.*, p. 277, resp. p. 210. After Kubilai's ascent to the throne, in 1261, some kind of ceremonial and propitiatory drinking was kept in the ritual of the spectacular imperial receptions in the main palaces of the new residence of Tai-du near Peking (cf. Pauthier, *Le Livre de Marco Polo*, I, p. 294), but it was Tamerlane who resumed, or continued, the old Mongolian way of collective drinking on a large scale with a cupbearer staying in the center of the hall. Several miniatures of the Mongolian and Timurid periods of Persian art show this particular aspect of the receptions at the Mongolian court. Cf. E. Blochet, *Les Enluminures des Manuscrits Orientaux de la Bibliothèque Nationale*, Paris, 1926, and F. R. Martin, *The Miniature Painting and Painters of Persia, India and Turkey*, 2 vols., London, 1912.

²⁷ *The Book of Daniel*, Ch. 5.

delirium it was easy to create among the heterogeneous and sometimes antagonistic guests of the imperial festivals a sort of supernatural feeling of fraternity, companionship and social "spirit," which the crafty and experienced Tartar chieftains were able to exploit and increase. In the dipsomaniacal excitement of a *kurultai* many of the tribal enmities, racial tensions, feudal competitions, personal grudges and religious quarrels, which divided the innumerable members of the elective assembly, dissolved in an atmosphere of cheerfulness and coöperation which the Tartar rulers wisely tried to keep alive by increasing the number of meetings and feasts as well as the profusion and variety of exhilarating drinks. Assemblies of that convivial kind are known to have existed among the Asiatic and Germanic migratory peoples and tribes who settled down in the western parts of the Roman empire.²⁸ The last ramifications of those collective and corporative drinking parties are represented by the former bouts of German students with their rigid formalism, songs, odd rites and the *fidelitas* as a gregarious feeling of "elevated" comradeship.

2.

Well aware of the political importance of those ritual and compulsory conventions, Mangu Khan wanted to give his reception a more dignified and orderly organization. He felt that it was "unseemingly to bring skins of milk and other drinks" into a hall where he showed his great glory and made his military leaders, high officials and the guests from foreign countries "largess of robes and presents."²⁹ Those skins still represented

²⁸ A survey of the drinking customs and the literature pertaining to that subject matter in *Encyclopaedia of Religion and Ethics*, Vol V, 1912, pp. 72-82.

²⁹ SF, p. 276; Rockhill, p. 207.

the old Mongolian traditions and the survival of usages and objects going back into an almost unscrutable antiquity. It was in order to preserve a time-honored national custom that Tamerlane tolerated the two old-fashioned leather bags among the innumerable and sophisticated receptacles for wines and liquors set up in and around his magnificent pavilion. Mangu Khan kept the old custom in his camps and country residences, but he decided to make a radical change in his more imposing hall at Karakorum. The problem was difficult to solve because of the great concourse of people and the variety of beverages served to the thirsty multitude on such occasions.

The Mongols consumed a respectable variety of fermented and distilled drinks, mostly imported from China and Kipchak, as, for instance, wine of rice, called *darasun*, a cervoise of millet or *bal*, and mead prepared with honey. Wine came from Persia and Turkestan.^{29a} But the national Mongolian drink was the *kumis* called *kosmos* or *karakosmos* by Friar William and *kemiz* by Marco Polo.³⁰ It consisted of fresh fermented mare's milk and was "prepared in such a way—Friar William says—that you would take it for white wine."³¹ It had a strong intoxicating effect and was kept near the entry door of the tents of people who could afford to enjoy it *ad*

^{29a} Grapevine from Turkestan is mentioned by Marco Polo (Yule, *The Book etc.*, I, pp. 153 and 188). On grapevine in Eastern Asia, cf. B. Laufer, *Sino-Iranica*, Chicago, 1910, pp. 220-245.

³⁰ On these different drinks, cf. SF, p. 276 and Rockhill, p. 208 (also the notes on pp. 62 and 85); Yule, *The Book etc.*, I, pp. 257-259. For the term *darasun* (spelled *terraccina* by Rubruck), cf. P. Pelliot's note in *T'oung Pao*, Vol. XV, 1914, p. 443. On the manufacturing of *kosmos*, cf. SF, pp. 177-179; Rockhill, p. 66 f. It was offered to honored guests, sprinkled on the felt idols and used especially in summertime. Christians avoided drinking *kumis*.

³¹ SF, p. 260; Rockhill, p. 186.

libitum and to offer it to guests. In that case the gesture was accompanied with a song and a flourish from a lute-player striking his instrument. Friar John of Pian del Càrpine expressly reports that no prince of the Tartars ever drinks, especially when he is in public, without there being singing and guitar playing.³² The dregs left over from the preparation of *karakosmos* were given to the slaves as a drink.³³

At the emperor's festivals and receptions all these liquors had to be distributed in large quantities and for several hours in a hall filled to capacity with nobles and notables from many countries. It was in order to assure a fair, speedy and orderly distribution of those different Asiatic drinks that the emperor asked the Parisian master to contrive a fountain fitting into the architectonic frame of his throne and reception hall. When the fountain was inaugurated at the spring reception of 1254, the Parisian master got a special reward of one hundred *iascots*, which represented a considerable amount of money.³⁴ He was entrusted besides with the honorable charge of acting as chief butler at a solemn reception attended by the envoy of the Caliph of Bagdad, some Indian ambassadors and the representatives of the "Soldan of Turkia."³⁵ These dignitaries were especially summoned to attend the ceremony because the emperor wanted to impress the last independent sovereigns of Asia with the wonders of his court.³⁵ The

³² On the drinking ceremonial, cf. Rockhill, p. 20, 22, 62 f., 175, 186, 248.

³³ *Ibid.*, p. 67.

³⁴ The correct form of the term *iascot* used by Friar William is *yastug*, a Turkish word. Cf. P. Pelliot's note in *T'oung Pao*, Vol. XXVII, 1930, pp. 190 ff. For the value of the *iascot* cf. Rockhill, p. 156, n. 2.

³⁵ *SF*, p. 305; Rockhill, p. 247.

³⁶ Friar William was (intentionally?) absent because he "had gone to the church to baptize three children of a poor German" he had found there (*loc. cit.*).

feast lasted four days. The quantity of mare's milk which passed through the master's fountain in one of those great drinking bouts had been carried to the hall on a hundred and five carts and ninety loaded horses.³⁷ These figures illustrate the size and importance of Boucher's work as well as the number and consuming capacity of the imperial court and guests.

The spectacular fountain contrived by the Parisian master with the help of his fifty workmen and at the cost of three thousand *iascots*, has always attracted the attention of the readers of William of Rubruck's detailed description, especially since the eighteenth century when the fondness for every kind of *chinoiserie* reflected the general interest in and the erudite curiosity about the civilization of Eastern Asia. Nevertheless, that strange piece of craftsmanship was always considered a mere plaything devised for the delight of a semi-barbarous sovereign. A closer investigation of its details discloses some curious and neglected aspects of mediaeval civilization equally as significant for our knowledge of Asiatic traditions as for an understanding of the cultural relations between the East and the West. For this purpose Master William's fountain must be considered from both the artistic and technological point of view. Furthermore, it can be interpreted as an expression of an intricate symbolism embodied in the most striking features of its complicated structure. It is in this way that this forgotten prototype of modern prosaic drug-store fountains turns out to be one of the most attractive and significant monuments of thirteenth-century Asia.

This was exactly what Mangu Khan wanted his fountain to be. He was an ambitious sovereign and the first of Genghis' successors who showed a deeper appreciation

³⁷ *Ibid.*

of intellectual values beyond the merely pragmatic and utilitarian concerns of an efficient political organization and of further territorial conquests.⁸⁸ He was opposed to and suspicious of China, which in fact soon afterwards transformed the Genghizide family into a purely Chinese dynasty and the Mongolian empire into a weak Asiatic commonwealth ruled by a decentralized federation of ambitious and essentially autonomous princes. When Kubilai Khan installed near his Peking residence some of the famous astronomical instruments executed by a Persian scholar in 1279, he only materialized his brother's unfulfilled desire to entrust the famous Persian mathematician Nasir ed-Din with the construction of an up-to-date observatory at Karakorum.⁸⁹ Likewise, when Mangu Khan projected a plan to build a large automatic fountain in the central nave of his reception hall, he appointed the French goldsmith of Arik-Buga's *ordu* instead of one of the many excellent Chinese artisans who had constructed the imperial palace and had settled down in the capital for good.

In doing so, the clever sovereign proved to have acquired an adequate appreciation of the different talents, traditions and experiences characteristic of the contemporary civilizations represented in his empire and

⁸⁸ On this particular aspect of the emperor's personality cf. E. Bloechet, *Introduction à l'Histoire des Mongols*, pp. 161-3.

⁸⁹ *Ibid.* and Yule, *The Book etc.*, I, pp. 456 ff.: Mangu Khan's interest in astronomy was probably connected with the astrological practice of his very active "diviners" who knew something of astronomy and were able to predict the eclipses of the sun and moon (cf. SF, p. 301 and Rockhill, p. 240). The compilation and publication of the calendar belonged to the highest public duties of a Chinese emperor, taken over by the Genghizide Khans after the destruction of the Kin and Sung dynasties in the thirteenth century. Hence the great importance of astronomy at the court of Mangu and Kubilai Khan. It may be taken for granted that much of this rudimentary knowledge of astronomy was based on Western Asiatic science and traditions.

at the court. Nowadays a popular view occasionally supported by Oriental chauvinists and enthusiastic writers likes to attribute to old China every kind of scientific and mechanical talent and makes of the Far East the cradle of some fundamental technological inventions of our civilization. The sober mind of a hard-drinking emperor already recognized that although his Chinese subjects were skilled architects, exquisite decorators, incomparable silk-weavers and able makers of paper, dyes, pottery and explosives, on the other hand they lacked interest, imagination and ingenuity in the field of technological ability and mechanical arts. With all the prudence needed in making general statements it can be said that Chinese technical competence and traditions were of the Egyptian or manual type, rather craftsmanship than engineering, and consequently less developed in undertakings which presuppose computation, measurement and the use of elaborate or complicated instruments.⁴⁰

Pater Ricci and the first learned Jesuits who went to China in the sixteenth and seventeenth centuries were surprised at the primitive conceptions prevailing in every branch of science and engineering based on mechanics and mathematics or requiring a certain skill in devising a tool or in combining some implements for a mechanical advantage.⁴¹ It is well known that the initial success of the Jesuits in China depended upon their skill in making

⁴⁰ Cf. the short but excellent survey on "The Development of Mechanism in Ancient China" by H. Chatley in *Engineering*, Vol. 153, 1942, pp. 173 f.

⁴¹ Cf. *Opere Storiche del P. Matteo Ricci*, publ. by P. Tacchi-Venturi, 2 vols., Macerata 1911-13, especially I, pp. 17-23, and N. Trigault, S. J., *The China that Was: China as Discovered by the Jesuits* etc, transl. by L. J. Gallagher, S. J., Milwaukee, 1942, Chs. 4 and 5. Cf. Alfred Chapuis, *La montre chinoise*, Neuchâtel, 1919, reviewed by P. Pelliot in *T'oung Pao*, Vol. XX, 1920, pp. 61-68.

clocks, fountains, guns, automatons and other kinds of useful and entertaining contrivances. With all those toys and tricks they were able to impress some educated and learned sections of the contemporaneous upper classes but had little influence upon Chinese thought and character. The great respect of all Asiatic peoples for the ingenuity of Western men never implied a full-hearted and lasting acceptance of the principles, methods and doctrines on which our scientific and material civilization are based. Repeated experiences have proved that when the Orientals learned the tricks or recognized the futility of Western inventions for their way of life, they got rid of the masters as well as of their wisdom.

In selecting the Parisian goldsmith from among the innumerable artisans of his apanage, Mangu Khan was fully aware that even though his magicians, diviners and sorcerers were able to perform the most astonishing tricks, only a "Franc" craftsman could provide his palace with a satisfactory mechanical fountain for his drinks. But while the Jesuits came to China provided with all the technical experiences of the Italian Renaissance and the scientific preparation of their schools, at Boucher's time western technology was still in its infancy and mechanical engineering almost entirely undeveloped. It was just in Boucher's day that the first plans for church clocks, useful machines, strange toys and rudimentary robots or automatons timidly took shape in Villard de Honnecourt's sketch book as projects about to be realized and exploited.⁴¹ We do not know whether all the engines, devices and implements invented and described by this French master were executed and put to work. There are some vague similarities and

⁴¹ H. R. Uahnloser, *Villard de Honnecourt*, Wien, 1935, pls 9, 39, 44, 45 etc and pp. 21, 104, 134 etc.

coincidences between the machines and objects projected by Villard de Honnecourt and the impressive apparatus devised by his fellow-countryman at the court of the Khans.

In spite of the Oriental environment and the typical Mongolian significance of the work, there cannot be any doubt that in contemporarily contriving their artifices at a distance of many thousand miles both the French masters were following an identical intellectual current and worked on the basis of the same artistic, technical and cultural presuppositions. None of their accomplishments have been preserved. But a number of neat sketches, some brief notes and a detailed description of Mangu Khan's fountain still reveal the congeniality of the two Frenchmen and a new development of technological interests in the Western and Eastern worlds. In Europe it would not have been easy to find a potentate ready to risk a considerable sum of money for the realization of the mechanical whims of an artist. But Mangu Khan had the means and a keen interest in his magic fountain.

3.

"Master William the Parisian—Friar William reports—made a great silver tree, and at its roots are four lions of silver, each with a conduit through it, and all belching forth white milk of mare. And four conduits are led inside the tree to its tops, which are bent downward, and on each of these is also a gilded serpent, whose tails twine round the tree." On its silver branches there hung leaves and fruits, probably likewise of gilded silver. It was from those pipes that the four different intoxicating liquors reserved for the aristocracy and the guests flowed down to the foot of the tree where as many silver

bowls were always ready to receive them. Between these four conduits—the missionary adds—Master William made an angel with a movable arm holding a trumpet. When more drinks were needed, the chief butler had only to shout to the angel to blow his trumpet, and then the angel placed the trumpet to his mouth and blew it “right loudly.”

At first the ingenious goldsmith had thought to achieve that effect by placing bellows at the mouth of pipes going through the trunk of the tree up to the angel on top. But since the bellows did not give enough wind, he built a vault underneath the tree and hid a man in it who had to puff “with all his might” into the pipe leading to the angel in order to make him blow his trumpet. “Outside the palace—Friar William concludes—is a cellar in which the liquors are stored, and there are servants all ready to pour them out when they hear the angel trumpeting.” The drinks are then directed into their proper conduits leading down into bowls from which the butler carries them to the men and women assembled in the hall.

At first sight this odd and stupendous contrivance appears as the eccentric outgrowth of a baroque imagination. It is certainly not by pure chance that the only known attempt to reproduce Master William’s drinking-fountain was made in 1735 by an engraver who illustrated Bergeron’s edition of Friar William’s travel account.⁴³ (Plate 3) On the other hand, it is evident that it was Mangu Khan’s intention to impress his vassals, allies and subjects, as well as the envoys of foreign sovereigns, with a richly decorated, costly, glittering and puzzling monument, the fame of which would spread the glory

⁴³ P. Bergeron, *Voyages faites principalement en Asie*, La Haye, 1735, p. 96.

of his court throughout the world. The emperor evidently wanted to surpass in lustre and repute the very few contemporary sovereigns who could compete with him in wealth and magnificence. At the same time he created a monumental expression of the artistic and cultural heights attained by the Tartar dynasty at the apex of its political and military power.

As a matter of fact, Master William's fountain was the only one of the legendary marvels of Asia that the friar was able to discover during his travels and to represent to his baffled contemporaries already fascinated by literary and popular tales of the imaginary wonders of Asia. His friendship with Boucher put him in a position to know all the tricks of that startling device whose structure and machinery remained a secret to the multitude who saw the liquors flowing incessantly into the silver bowls at the roots of the tree and heard the angel loudly trumpeting his encores for more rounds of drinks. In his circumstantial technical description, which is perhaps unique in the whole mediaeval literature, the friar did not omit any important artistic, decorative or mechanical detail. It is only through his reliable and clever report that we can see before our eyes the silver tree with its gilded fruits and leaves, the "lions" and the "serpents," the angel and his trumpet, the bowls, bellows, conduits and pipes, with the man hidden in the vault under the floor and the servants in the outdoor storerooms pouring down the liquors at every blast of the trumpet. *Every detail of the monument has its own story and a certain amount of artistic, technical and symbolical implications worth while considering at length in the general framework of the mediaeval civilization of Europe and Asia.*

First of all, the situation and the proportions of the

fountain-tree are significant. It stood inside the hall, beyond the middle door, and it extended its branches deep into the central nave of the hall, taking up a large section of it. Thus the fountain was placed directly at the palace's entrance where ordinarily the jars or bags of wine and liquors used to stand in the tents of the princes, nobles and wealthy Mongolians. The trumpeting angel took the place of the guitarist who sat next to the receptacles and made a noise according to the drinking ritual. The imperial orchestra was placed in a different part of the hall. In erecting a fountain on that spot, the Parisian master followed a national Mongolian custom to which he gave a dignified and artistic form.

Sitting on his throne on the opposite side of the hall, the emperor had the tree always before him, with just enough space between it and the estrade to give room only to his cupbearer and the envoys bearing their presents. Consequently all the guests were crowded in the two aisles of the building, which were accessible through separate entrance doors. We are not told the reasons that induced the Parisian master to give his fountain the form of a tree. It cannot be denied that a tree of such considerable proportions built within a closed wall is a striking feature, which claims an explanation beyond the merely artistic and ornamental intentions of the artist. Since the emperor's throne represented—after an original Chinese conception—the place of the North Star around which the whole firmament turns,⁴⁴ the tree to the south certainly had a symbolic significance other than the fanciful invention of an ingenious craftsman and the liberal hospitality of an ambitious sovereign.⁴⁵

⁴⁴ O. Sîrén, *The Imperial Palaces of Peking*, I, p. 5.

⁴⁵ On this orientation cf. Peter A. Boodberg, "Marginalia to the His-

It would be out of place to raise in this context the intricate question of tree-worship and symbolism practised in the Asiatic religions and extended to all the countless ramifications of mythology, folklore, superstitions and traditions of the Old World.⁴⁶ Without taking into consideration the innumerable and ubiquitous stories of the tree-spirits collected in Frazer's *Golden Bough*⁴⁷ and discussed in no less numerous monographic contributions, it can be established from the very beginning that Master William's silver tree did not merely materialize some widespread superstitions belonging to the Asiatic Shamanism that still dominated, under different aspects and expressions, in the leading sections of Mongolian society and was openly professed by the emperor, his family and most of his vassals and dignitaries. The limitation of the symbolic value of the tree to the magic doctrines of the Tartar tribes must be excluded because of the very polyvalence of that emblem, i. e., because of the number of reactions, suggestions and implications a tree like that was able to suggest and to express to the different peoples of the Asiatic continent and to the many national and religious groups represented at the court. On the other hand, the attitude of the mediaeval Asiatic peoples toward art and decoration was never exclusively aesthetic. Most of the ornamental and iconographical motives had some determined religious, superstitious or magic implications varying according to nations, tribes and creeds. It can be assumed that of all the guests who gathered in Kara-

tories of the Northern Dynasties" in *Harvard Journal of Asiatic Studies*, Vol. IV, 1939, p. 246.

⁴⁶ Cf. *Encyclopaedia of Religions and Ethics*, Vol. XII, 1922, pp. 448-57.

⁴⁷ Especially Vol. II, *The Magic Art and the Evolution of Kings*, New York, pp. 7-96 and *passim*.

korum from all over the world none could have remained indifferent to the sight of an elaborate object which was able and intended to inspire reverence and devotion to all the people assembled in the hall. Not even Friar William of Rubruck, generally very severe in judging the customs of the Tartars, had any objection to that masterpicce of craftsmanship in spite of his Christian sensibility against every expression of pagan worship.

4.

It is in a higher sphere of myth and faith that a correct and complete explanation of the tree emblem can be found. It stood at the very center of the empire of a sovereign who had proclaimed that "as God gives us the different fingers of the hand, so he gives to men divers ways."⁴⁸ To his Buddhist subjects from Tibet and Mongolia the tree could have suggested the constant and most revered attribute of Sākya-muni who got his first illumination under the *bodhidruma* and died under a tree.⁴⁹ It has been frequently reproduced in Buddhist art and described in the canonic and legendary texts inspired by Buddha's life and doctrines.⁵⁰ Here it appears again with the principal marks required by the tradition and at the same time in a form determined by the ability of an artist. The considerable dimensions

⁴⁸ Rockhill, p. 235.

⁴⁹ This famous episode is narrated in every biography of the Buddha, but E. Senart's *Essai sur la Légende de Buddha*, 2nd ed., Paris, 1882, pp. 162-214 still is the most circumstantial discussion of the *bodhidruma* in connection with Brahmanic mythology, Buddhistic doctrines and Indian literature.

⁵⁰ A. Coomaraswamy's *Elements of Buddhist Iconography*, Cambridge, Mass., 1935, offers but little to the knowledge of this specific aspect of Buddhist iconography. Cf. the Bibliography.

of Master William's tree, which occupied a large section of the imperial hall, and the gilded fruits hanging from it correspond with the widespread conceptions of that sacred and cosmic tree, from the branches of which the liquor of immortality was said to flow down like the exhilarating and invigorating beverages distributed by the liberality of the emperor. In that form it satisfied some of the requirements of the Buddhist legend and doctrine as did many other trees in Asiatic nature and art. The corrupt Buddhism of eastern Asia could hardly find in Master William's work a blasphemous distortion of a revered religious symbol.

The Christians of the court could dissociate themselves from all those pagan inferences by simply adapting to the same object and its details the corresponding Biblical conceptions and implications which the Parisian master certainly had in mind when devising his monument. There cannot be any doubt that a pious artist like Guillaume Boucher, who had been educated in thirteenth-century France and knew so much about the rites, the liturgy, the sacraments and the sacred objects of the Catholic Church, was fully acquainted with the religious symbolism developed in the Gothic art of his time and country and connected with every single element of architecture, iconography and decoration. For him, as well as for all the Christians of Mongolia, it was impossible to look at the silver tree without thinking of the tree of Paradise and the four rivers originating at its roots and giving health, strength, delight and longevity almost as the four standard liquors distilled for the Mongolian aristocracy were supposed to do. There are several tales, poems, miniatures, reliefs and paintings in which all these elements and ideas appear connected around a tree conceived as the symbolical

center of a more or less intricate allegory.^{50a} Moreover, a very successful cycle of tales and poems had spread and developed during the thirteenth century around this topic which became one of the most inspiring motifs of the late Christian mythology.⁵¹ After some poetical, legendary and esoteric reblossomings, a branch of this mythical tree was turned into the wood from which the holy cross was made. It became a landmark of Asia in Marco Polo's *Description of the World* and in some other travel accounts of the Middle Ages. Long before that, all the Biblical religions had joined or accepted the pagan conceptions which discovered in a tree, in one form or another, a token of the deity.

Some of these different aspects of tree-worship had their counterpart in Mohammedan folklore and local legends, if not in the Koran and sacred books of Islam.⁵² The tall and rare trees scattered over the barren mountains and desert tablelands of Persia, Badakshan, Turkestan and Afghanistan were worshiped by the Mohammedan populations of the respective districts in continuation of very ancient indigenous cults.⁵³ The trunk of one of these trees is said to have been preserved in a mosque of Tabriz as an object of widespread devotion.⁵⁴

^{50a} In his attempt to reproduce Mohammedan paradise the Old Man of the Mountain, chieftain of the "Assassins," made four conduits of wine, milk, honey and water running through his famous garden of Alamut described by Marco Polo. Cf. Yule, *The Book etc.*, I, 140.

⁵¹ Cf. Yule, *The Book etc.*, I, pp. 123-39.

⁵² J. Wellhausen, *Reste Arabischen Heidentums*, Berlin, 1897, has little to tell about the original tree-worship in Arabia, which probably was less extended than in Central and Eastern Asia.

⁵³ Cf. Owen Lattimore, *The Desert Road to Turkestan*, Boston, 1930, p. 187.

⁵⁴ Cf. Odoric of Pordenone's *Relatio* in SF, p. 417; Henri Cordier, *Le Voyage en Asie au XIV^e siècle du bienheureux frère Odoric de Pordenone*, Paris, 1891, pp. 19-28, where other examples of Asiatic tree-worship and legends are mentioned and discussed. English translation of the passage with notes by Yule-Cordier, *Cathay and the Way Thither*, I, p. 103.

In this form it might have represented the *Arbre Sec* of the legend of Alexander the Great, the Biblical tree of Seth, Firdusi's speaking tree or the tree said to have grown in Persia from Mahomet's staff.

With this great variety of possible and familiar interpretations Master William's silver tree became the most eloquent and the only artistic expression of the religious eclecticism so typical of the internal policy and the spiritual attitudes of the Mongolian emperors. There is no determined syncretistic trend in this system which only intended to allow everybody to worship God and the Khan in his own way. But this does not signify that the emperor wanted to erect in his palace a sort of liberty tree symbolizing an enlightened freedom of worship and the moral equivalence of all the leading creeds of his domain. The silver tree in his hall only preceded the erection of a more pretentious Buddhistic monument, which was an unmistakable expression of Mangu Khan's final religious preference.⁵⁵ It would not be reasonable to insist too much on the religious symbolism of the silver tree without considering some national and political aspects of Mongolian tree-worship.

The Mongols had developed their own independent tree mythology which connected their primitive religious

⁵⁵ Cf. above p. 24, n. 63. The monumental *stūpa* erected by Mangu Khan at Karakorum, in 1257, as a public manifestation of his propensity for Buddhism probably was of the Tibetan type as described by the texts published by G. Tucci, *Indo-Tibetica*, Roma, Accademia d'Italia, 1932, Vol. I, p. 24 ff. The construction of those buildings was always directed by priests acquainted with the complicated symbolism inherent in their architectonic and ornamental details. As to Mangu Khan's Buddhistic inclinations after Chinese traditions cf. Rockhill, p. 236, n. 1. This final preference of the emperor may be explained by the large part Tibetan Lamaism granted to the shamanistic doctrines and practice of Eastern Asia. The survival of Nestorianism in this pagan environment probably has the same explanation.

conceptions and superstitions with political implications and imperialistic purposes. The silver tree in front of the imperial throne was evidently intended as a national and dynastic emblem erected as an expression of tribal and family traditions, and of Mongolian power and expansion. Tree-worship was no less represented among the Tartars than among other Asiatic tribes. In the endless and dreary steppes, at the limit of interminable deserts, on the top of impervious mountains a tree appeared to be a sign of divinity and, more than elsewhere, a token of life and safety. A highly venerated pine, decorated with pieces of cloth, rosaries and other offerings mentioned in Mongolian folklore cannot be considered an isolated case when the sacred trees of China likewise appear crowded with votive tablets and inscriptions.⁵⁶ The Mongolian tribes shared with their neighbors the belief in tree-spirits and all the rituals, superstitions and charms usually connected with the primeval and ubiquitous conceptions of a natural religion.⁵⁷

It was within this general framework that the Genghizide dynasty had developed its own mythology as expressed in the typical form of a poetical history in the *Yüan-ch'ao-pi-shi* or *Secret History of the Mongols*. This short narrative of the first development of Tartar power and expansion, composed about 1240 and preserved in a Chinese transcription, reveals in its uncouth but captivating form the contemporaneous interpretation, the spiritual background and the epic make-up of the events.⁵⁸ With other tales of that kind the

⁵⁶ Howorth, *op. cit.*, Part IV, p. 93.

⁵⁷ Frazer, *The Golden Bough*, II, p. 14 and *passim*.

⁵⁸ The Mongolian text restored and published by E. Haenisch, *Manghol un Niuca Tobca'an*, 2 vols., Leipzig, 1937/8. Extracts with German translation, Introduction, notes etc. by E. Haenisch, "Untersuchungen

genealogic and legendary history of the dynasty was taken over by the official chroniclers of Persia and China in the same way that, at the other end of the world, the contemporaneous Spanish, French and English historians diluted into more or less official prose the poems on the Cid, Charlemagne and the fabulous kings of Britain.⁵⁹ According to those courtly and literarily embellished reports, Genghis Khan started his fatal career under the same spreading tree at Kargumak-Jubur on the Onon river where the last of the Mongol clan to bear the title of Khan once celebrated his election.⁶⁰

At the height of his life and triumph, conscious of the approach of death, Genghis indicated the place of his burial under a solitary tree in the shade of which he had passed some time in pleasant reverie.⁶¹ Since that day every tree of the mountainous borderlands of Mongolia and China claims the distinction of protecting the tomb of the mighty emperor whence he will rise again for a new conquest of the world. In his famous portrait, which adorns the superb Parisian manuscript of Rashid ad-Din's historical compilation, Genghis is represented

über das Yuan-Ch'ao-Pi-Shi" in *Abhandlungen der Philologisch-Historischen Klasse der Sächsischen Akademie der Wissenschaften*, Vol. XLI, 1931, N. 4. A French translation of the first section of the Chinese version by E. Blochet, *Introduction à l'Histoire des Mongols* etc., pp. 272-298.

⁵⁹ Rashid ad-Din's *History of the Mongols* is a section of his monumental *Jāmi-el-Tevarikh* composed shortly after 1300 on the basis of authentic documents and reliable traditions. The Yuan-shi is its Chinese counterpart and was written shortly after the overthrowing of the Mongolian dynasty by the Ming, after 1368. The old tales and legends about the origin of the Genghiside dynasty were preserved in the Mongolian chronicles of the seventeenth century, as, for instance, Sanang Tsen's *History of the Mongols and the Altan tobci*.

⁶⁰ E. Haenisch, *Untersuchungen*, p. 30, par. V; Blochet, *Introduction* etc., p. 296 f.; Vladimirtsov, *Genghis Khan*, p. 32.

⁶¹ Vladimirtsov, *op. cit.*; p. 145; Pauthier, *Le Livre de Marco Polo*, I, p. 180, n. 4; Yule, *The Book* etc. I, p. 247, note 3.

sitting on his throne under two blooming trees and with his cupbearer and drinks before him.⁶² In the miniature the two trees may designate an outdoor audience in summertime. In his national and dynastic legend some decisive events of Genghis' life and dynasty, and his prophesied resurrection or reincarnation are denoted by a tree almost in the same way as for the life and legend of Buddha. In his Mongolian homeland the tree supposed to mark his tomb was considered the abode of his spirit and connected with the poetical and legendary concepts of Genghis' weird personality, eternal memory and everlasting dynasty.

His son Ogudai perpetuated this sort of dynastic tree-worship when he let "a small tree grow for his soul, and he ordered that no one was to cut a branch of it; and whoever did . . . was beaten, despoiled and badly treated."⁶³ During his stay in Mongolia as an envoy of Pope Innocent IV, Friar John of Pian del Càrpine, though greatly in need of something to whip his horse with, never dared to cut a switch there. The Persian painter who represented Ogudai sitting on his throne, with a huge tree in the background of a courtly scene, was certainly aware of this dynastic symbolism preserved also by the Ilkhans for the duration of their dominion over the Mohammedan countries of the Middle East.

These details of a Genghizide tree-mythology contribute to the explanation of the proper significance of Mangu Khan's silver tree as conceived and interpreted by the last Mongolian emperor who still impersonated

⁶² Bibliothèque Nationale, Suppl. Persan, N. 1113 (Cf. E. Blochet, *Les enluminures des manuscrits orientaux* etc., Paris, 1926, pp. 75 ff.).

⁶³ Johannes de Plano Carpini, *Ystoria Mongolorum*, SF, p. 48; Rockhill, p. 81 n. The extensive tree planting by Kubilai Khan is explained by Marco Polo also "because his astrologers and diviners tell him that he who plants trees lives long." Cf. Yule, *The Book* etc., I, p. 440.

the original traditions of his tribe and family. It was a monument of imperial and at the same time ancestral worship, unknown in that form to the Chinese official ritual of this cult and consequently abandoned by Kubilai after his accession to the throne and his acceptance of the traditional Chinese fashion of worshipping the tablets of his ancestors.⁶⁴ In the hall of Karakorum the tree designated the seat of the imperial authority and was the symbol of its dignity and power much in the same way as it was for the French and German mediaeval kings sitting in judgment and holding court under a spreading oak.⁶⁵

The essential difference consists in the fact that in the Mongolian capital the tree was an artificial one. It is impossible to establish how far this majestic emblem perpetuated the Western Asiatic symbol of the tree under the tent—or tabernacle—which represented the celestial vault, with all its religious and political implications.⁶⁶ This very old expression of divine protection to a sovereign considered a living god is closely associated with the idea of the "Everlasting Sky," or *möngke tengri* in whose name Genghis Khan and his successors believed, or pretended to believe, that they ruled the world.⁶⁷ It seems likely that an idea like this prompted the Persian illustrator of Rashid-ad-Din's *History of the Mongols* to represent all the members of the Genghiside dynasty sitting under a tree.⁶⁸ Master William's tree allowed the maintenance

⁶⁴ Yule, *The Book*, etc I, p 392.

⁶⁵ Cf. the author's *Paris nach den altfranzösischen nationalen Epen*, pp. 66-74.

⁶⁶ Robert Eisler, *Weltenmantel und Himmelszelt*, 2 vols., München, 1910, II, pp. 575-596 and *passim*.

⁶⁷ Vladimirtzov, *Cinghis Khan*, p. 64.

⁶⁸ Cf. the examples offered by E. Blochet, *Les Enluminures des Manu-*

of a dynastic tradition even on the frequent occasions of indoor receptions and audiences.⁶⁹ There is nothing of this kind in the history of western court life.

For many reasons the idea of a tree remained closely associated with the founder of the Mongolian dynasties as an attribute of his power and fame. The existence of a dynastic tree-mythology among the Mongolian rulers is attested by Mandeville's story of "how the great Caane was hid under a tree, and so escaped his enemies because of a byrd."⁷⁰ The famous forger of Sir John's *Travels* took over the story from the more reliable account of the Armenian Haitun, who had lived among the Tartars and drew authentic information directly from Mongolian sources.⁷¹ Through the influence of these popular authors the tree symbol continued to express the idea of the Tartar domination and of Asiatic political usages. Speaking of the dry tree kept

scriits Orientaux etc., pl. xxiii, xxviii; F. R. Martin, *The Miniature Painting and Painters* etc., II, pl. 43.

⁶⁹ All audiences and receptions painted in the mentioned Persian manuscripts are represented as taking place in the open air. But the accounts of the Franciscan missionaries and of Marco Polo, as well as the Chinese ceremonial of the Yuan dynasty, clearly show that the emperor, the princes, envoys, dignitaries and nobles of the court and empire sat in the interior of the huge tents or halls, whereas the rest of the attendance gathered in a large front yard (cf. SF, pp. 116 ff., 211 ff., 244 ff., 276 ff. etc.; Yule, *The Book* etc., I, pp. 381 ff.; Pauthier, *Le Livre de Marco Polo*, I, pp. 291 ff.).

⁷⁰ *The Travels of Sir John Mandeville*, Ch. LXIX. It was this popular book and its translations into all European languages that spread the tale of the "Great Caane" sitting with his court and guests under "a vine made of gold that goes all about the hall" (*ibid.*, Ch. LXVII).

⁷¹ Cf. Hayton, *Fleur des Histoires de la Terre d'Orient*, Livre III, Ch. 4. This famous author, a nephew of Haithum I, King of Armenia, related this and other episodes of the poetic or legendary history of Genghis Khan after tales and poems probably told by Mongolian rhapsodists. On other sources of Mandeville's *Travels* cf. A. Bovenschen, *Die Quellen für das Reisebuch des Joh. von Mandeville*, Berlin Dissertation, 1888.

"in templo Tartarorum" in Tabriz, Johannes of Hildesheim relates, between 1364 and 1370, that "in all parts of Asia there is an old custom to recognize and obey as an absolute sovereign that king or lord or popular leader who is able to hang up his shield on that tree."⁷² This is, of course, a fabulous assumption connected rather with the German imperial saga than with Asiatic or even Tartar traditions.⁷³ However it may be, the roots of this legendary tree are not so far distant from those of Master William's artificial tree. Situated within the walls of the main building of the imperial residence and directly beyond the consecrated and inviolable threshold of the hall, it was the principal element of a sequel of tokens of the sanctity of the place where the emperor sat "like a divinity."⁷⁴ Many different aspects and concepts contributed to give that impression and to transmit it to the assembly. But it was Master William's silver tree that transformed the Chinese-styled reception hall into a Mongolian national shrine.⁷⁵

⁷² *De Gestis ac trina beatissimorum trium Regum Translatione*, quoted by A. Bassermann, "Veltro, Gross-Khan und Kaisersage" in *Neue Heidelberger Jahrbücher*, X, 1900, p. 34.

⁷³ For a tree designating a seat of authority cf. R. Eisler, *Weltenmantel und Himmelszelt*, II, pp. 588 ff.; Jakob Grimm, *Deutsche Rechtsaltertümer*, 4th ed., 2 vols., Leipzig, 1905, II, pp. 411 ff. and *passim*.

⁷⁴ For the threshold as a token of deity and the taboos and rituals connected with it cf. *Encyclopaedia of Religion and Ethics*, Vol. IV, 1912, pp. 846-52.

⁷⁵ The tree seems to be only one of the dynastic symbols preserved by the Genghizides in memory of the founder of the dynasty. One of those symbols is the bird painted on the top of Genghis' throne in a miniature of the Parisian manuscript of Rashid-ud Din's *Jāmi-el-Tawarikh* (cf. p. 112). The story of this bird is connected with that of the tree as narrated by Haytun (*loc. cit.*), who also relates that the princes of the imperial family wore feathers on their hats in memory of an episode in Genghis' life in which the tree and the bird had a decisive part. This symbolical ornament is painted in all the miniatures of the mentioned Parisian manuscript for the designation of the male members of the imperial family. A fourth dynastic symbol, also described by the Armenian

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The decorative elements of his fountain are the most common and ubiquitous in the whole history of the fine arts. Nevertheless, they deserve some critical consideration because of the extraordinary connection in which they appear. The emperor undoubtedly approved every detail of that costly and important work. Unlike his predecessors on the Tartar throne, Mangu Khan combined a remarkably extended intellectual interest with the parsimonious policy of a strictly controlled administration. The rather clumsy contrivance he entrusted to his goldsmith had to have some meaning in addition to being useful and decorative. Mangu Khan was certainly no exception to the general mediaeval and Oriental way of conceiving and interpreting artistic monuments and decorative motifs. And since the low standard of traditional Mongolian civilization prevented the development of artistic inspiration and of an ornamental language of marks and symbols, it was only by foreign types and patterns that the artist and his sovereign could disclose their intentions to the heterogeneous multitude grouped around the tree. In doing so, the Parisian goldsmith did not always need to depart from his French artistic models or to submit to the conceptions and practices of idolaters, diviners and unbelievers. The strange interferences between the Occidental and Oriental interpretations of the principal decorative motifs of Master William's fountain reveal

historian, is the felt on which the Khans were lifted after their election (cf. P. A. Boodberg, *Marginalia to the History of the Northern Dynasties*, pp. 242-246). Of all dynastic symbols of the Genghizides this one was the oldest and the most popular in the European West (cf. the author's essay on "Dante e l'Oriente" in *Giornale Dantesco*, XXXIX, 1938, pp. 74 ff.).

their polyvalent symbolism and the artistic and ideological background of the whole contrivance.

In Chinese art and beliefs the lion is, just as elsewhere, a royal animal and its fantastically distorted image was said to guard and to protect the entrances of the palaces of emperors and princes.⁷⁶ In some highly stylized features it is a permanent attribute of Buddha, in the wake of whose doctrines it became known and popular in all the countries of the Far East. But because of its very religious consecration and superstitious significance the lion did not acquire in the Buddhist sphere the same utilitarian function it always had in the Western world in addition to the decorative and symbolic uses.⁷⁷ Master William's four lions belching fermented mare's milk into the silver bowls at their feet were the first of that kind to appear in Eastern Asia, where gargoyles and lion-headed fountains seem to have been unknown and might have been considered unsuitable and even blasphemous.

In the Mediterranean area and especially in its western sections lions were since antiquity the most favored ornament of fountains wherever they were erected for public or private use. In these innumerable cases the lion had a merely secular and decorative function, entirely independent from those imposing or amiable lions supporting columns and guarding the entrances of mediaeval cathedrals as symbols of the power of the Church. The age-old and customary asso-

⁷⁶ E. Bretschneider, *Mediaeval Researches*, I, p. 148, n. 399. It is well known that the lion is not a native animal of China.

⁷⁷ Daremberg-Saglio, *Dictionnaire des Antiquités grecques et romaines*, Vol. II, p. 1236, art. *Fontaines*. For the lion as a protector of springs and fountains cf. O. Keller, *Die Antike Tierwelt*, 2 vols., Leipzig, 1909, I, p. 48, and II. Graillet, *Le Culte de Cybèle*, Paris, 1912, pp. 458, 515 etc.

ciation of a lion's head with running water, or even wine, was extraneous to Eastern art and craftsmanship. Master William simply transferred to the hall of Karakorum the contemporary Western fashion of camouflaging under such monumental figures the ends of conduits, aqueducts and pipes. His intentions were entirely workmanlike and artistic, just as were those of the contemporaneous masters who adorned in the same way the lion fountains of France, Italy and the famous *Patio de los Leones* in Granada's Alhambra.⁷⁸ But the Eastern Asiatic symbolism of those decorative animals is enigmatical and can be explained only in connection with other ornamental details of Mangu Khan's magic fountain.

The story of the four serpents twining their tails around the tree and discharging the drinks out of their mouths, is a little different but no less curious and interesting. To be sure, it is not clear what Friar William intended when speaking of those serpents. In the vernacular French tongue, which inspired his Gallicized Latin, this term designated snakes as well as dragons, alligators and every sort of important reptile and saurian. In the corresponding Chinese terminology there is the same confusion between the dragon and the snake.⁷⁹ Marco Polo called serpents the huge crocodiles hunted by the natives of Yun-nan as well as the great poisonous snakes that infest the mountainous regions of the Indian kingdom of Muftili.⁸⁰ In the French phraseology of the twelfth century the expression

⁷⁸ Cf. E. Enlart, *Manuel d'Archéologie Française*, 2 vols., 2nd ed., Paris, 1929, pp. 303-325; Viollet-le-Duc, *Dictionnaire Raisoné de l'Architecture Française*, Vol. V, art. *Fontaines*.

⁷⁹ Cf. Florence Waterbury, *Early Chinese Symbols and Literature*, New York, 1912, p. 67.

⁸⁰ Yule, *The Book etc.*, II, p. 76 ff. and p. 360.

"*a bestes et a serpens*" designates those multifarious serpentine interlacements in an ornamental framework of monsters and beasts characteristic of the decorative style of the East and very much appreciated, in the late Middle Ages, in Western Europe, where similar motives had developed as a typical expression of Gothic art.

In fact, it was just during Master William's apprenticeship, in the third decade of the thirteenth century, that French architects, painters, goldsmiths and sculptors invented the well-known teratological decoration of buildings, gargoyles, fountains and even books. In these decorations artists and craftsmen suddenly went on fancying horrible monsters, fantastic dragons, writhing reptiles, grotesque animals and devilish grimaces for the delight of the same public that appreciated a *Vierge dorée* and a *Beau Christ*.⁸¹ Whether this invasion of chimeric beasts has to be considered as a paroxysmal expansion of the so-called "Nordic mind" into the figurative arts⁸² seems to be as debatable an opinion as that which attributes the origin of Chinese dragons to Western and antique models and influences.⁸³

As a matter of fact, almost at the same time when the Parisian master invented the decoration for his tree, Villard de Honnecourt projected in France a similar piece of craftsmanship having at the foot and around the trunk of a tree a number of those Gothic "serpents" substantially analogous to the most authentic dragons of the East. Villard gave directions for making a

⁸¹ Cf. L. B. Bridahan, *Gargoyles, Chimeres and the Grotesque in the French Gothic*, New York, 1936; E. Mâle, *L'art religieux en France au XIII^e siècle*, 6th ed., Paris, 1926, pp. 46-62.

⁸² H. R. Hahnloser, *Villard de Honnecourt*, pp. 31, 36 etc.

⁸³ A. von Le Coq, *Bilderatlas zur Kunst und Kulturgeschichte Mittelasiens*, Berlin, 1925, p. 23.

church-desk for reading the Gospel, "having three serpents on the ground, and a platform upon them, and then three serpents of a different kind, and columns of the size of the serpents with a triangle on top."⁸⁴ His sketch book shows some models of the "serpents" intended to twine around the columns on which the eagle-shaped desk was to stand. By comparing the decorative elements and the whole conception of the works devised by the two contemporaneous French artists in such different places and for purposes so discrepant, it is sometimes difficult to establish where France ends and Asia begins, and to find out the boundaries between the sacred and the profane, the decorative and the substantial, the Christian and the pagan, the original and the traditional.

On the other hand, reptiles and dragons clasping the shafts of columns are among the most favorite decorative motifs of Chinese and Tibetan architecture. They were certainly represented in the interior of the Buddhist and Lamaist temples of Karakorum. Those coiling monsters generally have the same ascending direction given his "serpents" by Master William. He was probably much more interested in concealing under their winding bodies the conduits for the drinks than in the mythical and cosmogonic symbolism connected by Buddhists, Lamas and Chinese Taoists with temple ornaments of that kind. It can be taken for granted that the Chinese architects who built the Mongolian residence at Karakorum reproduced similar decorative patterns on the walls and columns of the imperial hall. They did so, shortly after 1264, when erecting Kubilai's famous movable palace of Shang-tu in which the roving spirit of the Mongolian nomads found its most elaborate

⁸⁴ Hahnloser, *op. cit.*, pp. 33-37 and plate 13. (Plate 6)

expression in some typical aspects of Chinese art and decoration. That palace, says Marco Polo, "stayed on gilt and lackered columns, on each of which is a dragon all gilt, the tail of which is attached to the column whilst the head supports the architrave, and the claws likewise are stretched out right and left to support the architrave."⁸⁵

In a secular and courtly environment those winding ornamental reptiles obtain a definitely heraldic significance with the dragon being China's national emblem as well as the insignia of the imperial dignity. Although Mangu Khan was not a Chinese educated sovereign, as his brother Kubilai happened to be, he undoubtedly participated in the widespread beliefs and doctrines connected with the imperial dignity and embracing the whole of the Far East, including the Mongolian tribes all around the Chinese frontier. It is within this vast and very old cultural sphere that the decorative symbolism of Master William's tree finds its proper interpretation.

While it appears evident that the "serpents" described by the Franciscan missionary were authentic dragons, it seems probable that the "lions" mentioned in his report were stylized tigers. Since the conception of a tiger dropped out of the European mind during the Middle Ages, the lion substituted for it in natural history, decorative art and in the colloquial vocabulary. It is by this term that Marco Polo always designates the tigers of the Far East that he once also called "striped lions."⁸⁶ Even the lion that Villard de Honne-

⁸⁵ Yule, *The Book etc.*, I, p. 299. These details are handed down only in Ramusio's version of Marco Polo's text.

⁸⁶ *Ibid.*, I, p. 397 and note 3. Yule's remarks p. 152, n. 2 and p. 352. The passages of Marco Polo's text in which tigers are mentioned as lions, *ibid.*, II, 637 (Index).

court affirms to have sketched from life—*al vis*—appears as a rather hybrid portrait of the king of the beasts with features determined by old sculptural and ornamental patterns.⁸⁷ It is difficult to recognize in his majestic lion a naturalistic reproduction of reality.

Master William's lions certainly were also chimerical animals of a purely artistic and decorative variety intended to be a counterpart of his "serpents" and constituting with them the basic cosmogonic symbolism of Far Eastern philosophy and religion. The dragon and the tiger represent—as it is universally known—the two world principles of the Chinese natural system of thought and order.⁸⁸ These two principles are embodied in the person of the emperor as a son of Heaven and a ruler of the Earth. Consequently the dragons and the tigers stand as religious and political symbols which fit perfectly into the general frame of the Genghizide conceptions of imperial power and the dynastic cult of the new Mongolian society.

It stands to reason that the Chinese artisans who decorated the residence of Karakorum had profusely employed those familiar symbols also as ornaments of the reception hall. Master William probably picked up those pagan motives or modeled his chimerical animals on Mangu Khan's orders without caring about their religious, philosophical and political implications. A Chinese artist would hardly have been able to turn

⁸⁷ Cf. plate 8.

⁸⁸ On these conceptions cf. R. Grousset, *Histoire de l'Extrême Orient*, Paris, 1929, I, pp. 187 ff. and the works of A. Forge, Maspéro, Granet etc. mentioned in the notes and bibliography. These Chinese principles of the cosmic, natural and human order are discussed in every treatise on Chinese philosophy, religion and art. Deeply rooted in national and mythological traditions they survived in spite of foreign religious and intellectual influence and still determine many popular beliefs and superstitions.

away from an age-old tradition by transforming the consecrated images of the two supreme beings—the *Yang* and the *Yin*—into fountains for Mongolian drinks. The Parisian master had no reason for being particularly sensitive about that. He even managed to convert his wondrous structure of tree-branches and monsters into a monument of his Christian faith.

There is only one feature of Master William's contrivance that is unmistakably Christian and entirely independent from every Asiatic artistic and religious influence: namely, the trumpeting angel on top. Although intended to blow for the refilling of the empty cups of carousing drinkers, the winged figure dominated from its lofty position and with its resounding blasts the whole structure of the fountain and the throng in the hall. We know enough about Boucher's personality to understand that all that decorative and structural arrangement was intentionally organized and worked out with the leading idea of giving a Christian symbol an unequivocal preëminence over all the ambiguous or frankly pagan expressions of foreign superstitions and Asiatic devilries. No trumpeting angel has ever been imagined in East Indian, Chinese, or Tibetan art. As for the Mohammedans of the Middle East and Central Asia, they developed a mythological angelology on the Biblical basis of the Koran which they extended as an eschatological and theological motive also into the iconographic and artistic domain.⁸⁹

⁸⁹ Walter Eickmann, *Die Angelologie und Damonologie des Korans* etc., New York-Leipzig, 1918. For the different types of angels in Mohammedan iconography cf. the numerous examples offered by E. Blochet, *Les Enluminures des Manuscrits Orientaux* etc. and F. R. Martin, *The Miniature Painting* etc. For a Chinese painted representation of a flute-playing angel cf. G. Eicke, "Atlantes and Caryatides" in *Chinese Archi-*

But in mediaeval Christian art and decoration the trumpeting angel is the common symbol of the last judgment and the divine justice which call the righteous and believers to eternal salvation and sinners or heathens to hell. In the widespread ecclesiastical symbolism of Honorius of Autun, so familiar to the French artists of the thirteenth century, the lion represents the Antichrist, and a dragon the devil.⁹⁰ In Master William's contrivance the angel of salvation towers over both just as does the image of Christ at the Cathedral of Amiens.⁹¹ It was in the thirteenth century that these figures stepped out from the scenes of the final judgment carved on façades of Gothic cathedrals or painted in manuscripts of the Apocalypse. At that time angels became top-figures of churches, towers, steeples, pinnacles, apsidal ridges and altar columns.⁹² Some of them were used as vanes. But Master William's angel was animated, and there is only one other example of a figure of that kind devised by a mediaeval artist up to that time.

It appears again in Villard de Honnecourt's sketch book as an ornament intended for a church tower or the top of an apsidal roof and shows an angel who always turns his finger toward the sun.⁹³ This is the oldest clockwork operated with wheels ever mentioned in the history of technology.⁹⁴ We do not know whether it worked, or even whether it was ever executed. As a matter of fact, it was only toward the end of that cen-

ture, *Bulletin of the Catholic University of Peking*, 1930, pl. VII, mentioned by P. Pelliot in *T'oung Pao*, Vol. XXIX, 1932, p. 169.

⁹⁰ E. Mâle, *L'Art religieux en France au XIII^e siècle*, p. 43.

⁹¹ *Ibid.*, p. 44.

⁹² Viollet-le-Duc, *Dictionnaire raisonné etc.*, I, pp. 17-20, Art. Anges.

⁹³ H. R. Hahloser, *Villard de Honnecourt*, pl. 12, pp. 29-31; pl. 44c, pp. 134-7.

⁹⁴ *Ibid.* and F. M. Feldhaus, *Die Technik der Antike und des Mittelalters*, Wildpark-Potsdam, 1931, p. 295.

lury that French and Italian engineers contrived mechanical clockworks like that and so beautifully described by Dante at the end of the tenth canto of his *Paradiso*.⁹⁵ But the two animated angels invented by the two French masters almost at the same time reveal the new trends of technological interests and mechanical hobbies developed at the zenith of mediaeval French civilization. In its celestial aspect and with all its pious allusions Villard's turning angel inaugurated a new epoch of human intellectual activity and practical achievement which culminated in the rational and technical conquests of modern times. Master William's trumpeting angel already announces on its part the future expansion of European craftsmanship and mechanics into Eastern Asia, as attempted much later and on a larger scale by the learned Jesuits of the seventeenth century and finally accomplished by modern engineers.

6.

With regard to their technological character the two angels represent two different stages in the history of the mechanical arts. Villard's angel was moved by a rudimentary wheelwork, which seems to be the first authentically described if not technically practicable. Therefore it is a much more serious affair than the legendary contrivances attributed to Boethius and Pope Sylvester II by some mediaeval authors.⁹⁶ As to Master

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"Indi come orologio che ne chiamì
Nell'ora che la sposa di Dio surge
A mattinar la sposa che più l'ami,
Che l'una parte e l'altra tira ed urge
Tin tin sonando con sì dolce nota
Che il ben disposto spirto d'amor turge,
Così etc."

⁹⁶ Literature on Sylvester II (Gerbert) in A. Potthast's *Bibliotheca*

William's Asiatic *pendant*, it was originally worked pneumatically by means of blowers which certainly were different from those used throughout the Middle Ages for church organs and other mechanical implements.⁹⁷ The unusual proportions of his animated tree prevented the blowers from working properly and obliged the master to resort to a trickish makeshift and to rely on the lungs of a Mongolian slave.

But the idea of his pneumatic contrivance was not new. A German manuscript from the end of the twelfth century contains the model of an artificial tree showing some birds on its branches and three bellows which make the birds sing and move their wings.⁹⁸ In a technical respect the image of that tree is preposterous because the pneumatic mechanism of those playthings was obviously invisible. But it is very probable that the bellows first used by Master William were of the same domestic type depicted in the miniature and not of a more elaborate structure, like those used in mediaeval technology for organs and machines.

A short inscription accompanying the miniature gives us the clue for the whole story. It points out that the sketch is connected with an episode in the legend of Alexander the Great which was as popular in the Mohammedan countries and groups of Asia as it was at the same epoch everywhere in Europe. In fact, the story of the fabulous vine described by Mandeville as made of gold and going all about the hall of the "Great Caane's palace and siege" had its origin in the spurious *Letter of Alexander the Great to Aristotle about the*

Historia Medii Aevi, 2 vols., 1896, p. 501; C. U. Chevalier, *Répertoire des Sources Historiques du Moyen Age*, 2 vols., Paris, 1905-07.

⁹⁷ Feldhaus, *op. cit.*, pp. 168, 310 and *passim*.

⁹⁸ Cf. *Annales Archéologiques*, Vol. XVIII, 1858, pp. 90-93 (Barbier de Montault, *Orgues en forme d'arbre*). Cf. plate 5.

marvels of India concocted in the third century of our era by an anonymous Greek author.⁹⁹ From there the wonder-tree passed into the mediaeval Latin versions of Alexander's poetical history and afterwards into the vernacular and highly popular poems and legends which charmed learned readers and illiterate listeners with evocation of the wonders of the East. It is in this way that the golden grapevine became a characteristic ornament of the imaginary residence of Prester John of India and the attribute of his temporal and spiritual power over Asia.¹⁰⁰

The details of this literary tradition are irrelevant in this context. But it is interesting to realize that the glittering tree in Mangu Khan's reception hall not only had some mythical, legendary and literary antecedents, but also some historical models, of which the bronze tree in the Magnaura palace of Constantinople is the most celebrated and characteristic. This famous contrivance was described by Luitprand of Cremona who saw it in 946 and it consisted of a bronze tree with various kinds of gilt birds on its branches.¹⁰¹ The tree stood in the Chrysotriclinium before the emperor's large mechanical throne guarded by gilt roaring lions and "so artfully contrived that while at one moment it was on the ground, at the next it was off it, and anon it was seen high up in the air." Outside there was a fountain with a silver eagle, which covered the conduits by holding a serpent in its talons.

It is difficult to believe that this imperial toy inspired

⁹⁹ Cf. F. Pfister, *Kleine Texte zum Alexanderroman*, Heidelberg, 1910, p. 22.

¹⁰⁰ Cf. the author's essay on "I cantari dell'India di Giuliano Dati" in *La Bibliofilia*, Vol. XL, 1933, nn. 8-9. Cf. plate 9.

¹⁰¹ Rockhill, *op. cit.*, p. 208, n. 2; J. Ebersolt, *Les Arts Somptuaires de Byzance*, Paris, 1923, p. 55 etc.

Mangu Khan's decision to have something like it at his court. When his magic fountain was executed, the Byzantine throne of Salomon, erected by the emperor Theophilus after 829 A. D., did not exist any longer in the imperial residence at Constantinople. It could not have survived the destruction and sacking of the palace by the French and Venetian "crusaders" in 1204. It is even doubtful whether Mangu Khan ever heard anything about a similar contrivance said to have existed in the tenth century in the palace of the Caliph al-Moktader at Bagdad, where many birds of precious metals were made to sing by means of machinery on the branches of a gold and silver tree.¹⁰² Nothing of this kind existed in the palaces of China and India. And none of all those famous monuments of craftsmanship described in mediaeval historical sources was intended to work as a fountain of water or beverages.

But the fame of those wondrous gadgets had spread everywhere, and especially in France and Western Europe, where they were considered the most impressive evidence of Oriental wealth, splendor and ingenuity. Master William had become acquainted with those contrivances long before his Asiatic captivity when he listened to the jongleurs of his native town of Paris reciting publicly the story of the strange mechanism devised for the Byzantine palace and described with fantastic details in the popular poem of "Charlemagne's Pilgrimage to Jerusalem and Constantinople":

The hall was overarched and closed at its top,
And built by compass measure with all the rules of art;
The pillar at the center was trimm'd with silver work.

¹⁰² On this and other similar contrivances mentioned by Mohammedan authors cf. A. Chapuis-E. Gelis, *Le Monde des Automates*, 2 vols., Paris, 1928, a popular and beautifully illustrated compilation with an extended bibliography of the subject matter.

There are one hundred columns of marble all around,
 Each one of which is cover'd throughout with finest gold.
 A pair of metal infants is sitting on their front,
 An ivory-white horn they have before their mouth.
 When a northwester blows, or any other wind,
 That batters at the hall just at the western side
 They make it turn around so many a time and oft
 Just like a waggon's wheel when rolling down a hill.
 Then all the horns start blowing with thunder-bugle's
 sound
 Like drums and thunder-storm, or a big hanging bell.¹⁰³

Besides this very successful Parisian poem, several other narratives of a less scurrilous character depicted similar fantastic contrivances resembling in their general purpose and aspect, as well as in some ornamental details, the magic fountain of Karakorum.¹⁰⁴ One of those mechanical marvels is described in the *Roman d'Eneas* as an ornament of Dido's palace in Carthage.¹⁰⁵ Another one existed in the fabulous residence of the Emir of Babylon as described in the poem of *Aimery de Narbonne*. In the romance of *Escanor* (of the thirteenth century) there is even a trumpeting angel on

¹⁰³ Cf. *Karls des Grossen Reise nach Jerusalem und Constantinople* (Pèlerinage de Charlemagne etc.) herausgegeben von E. Koschwitz, 7th ed., Leipzig, 1923, vv. 347-359. On the date of the poem, generally attributed to the first decade of the twelfth century(?) cf. the author's *Storia letteraria delle scoperte geografiche*, Florence, 1937, p. 87, n. 28. The poem was written in the Parisian dialect and translated into several European languages during the Middle Ages. For "The Palace of Hugon of Constantinople" cf. Margaret Schlauch in *Speculum*, VII 1932, pp. 500-514, with an appreciative discussion of the highly problematic connection of this monument with the supposedly Irish traditions of a mythical "Palace of the Sun."

¹⁰⁴ Cf. Otto Söhring, "Werke bildender Kunst in altfranzösischen Epen" in *Romanische Forschungen*, XII, 1900, pp. 491-640; E. Faral, *Recherches sur les sources latines des Contes et Romans courtois du Moyen Age*, Paris, 1913, pp. 307-388.

¹⁰⁵ Söhring, *op. cit.*, pp. 582 ff, where all the other contrivances mentioned above are described after the data offered by the poems.

the top of the golden tree. In no case were the French poets inspired by objects existing in their native country. All these marvels appear as landmarks of a fabulous world and as literary topics of fairy tales and romance of adventures.¹⁰⁶

These vernacular fables and poems represent the secular culture and the intellectual background of Guillaume Boucher, Villard de Honnecourt and the innumerable mediaeval artists and craftsmen whose names have not been handed down in chronicles, documents or travel accounts. In devising their automatons and wondrous machines, Guillaume Boucher and Villard de Honnecourt only realized under favorable circumstances or in preparatory sketches what they had learned from the current literature of their day and what was generally known as a typical aspect of the Eastern world. For the construction of his magic fountain Mangu Khan needed a Parisian master to create a *chef d'oeuvre* of craftsmanship by transferring a French literary topic and Byzantine artistic and technological traditions to the dreary region of the Upper Orkhon river where a semi-barbarous and nomad aristocracy tried to live up to the standards of higher contemporaneous civilizations.

In doing so, the Parisian master extended to the Far East the general revival of mechanical interests characteristic of civilization of the thirteenth century. But as a technical achievement his work is still rudimentary and based on deceptive tricks rather than on skill in invention. The apparatus of his silver tree functioned because of the coöperation of several trained slaves, and not as an independent or automatic machine. Never-

¹⁰⁶ For more examples cf. Alwin Schultz, *Das höfische Leben zur Zeit der Minnesinger*, 2 vols., Leipzig, 1889, I, pp. 96-99.

theless, this mechanical insufficiency cannot be entirely ascribed to incompetence or lack of technical imagination. An hydraulic mechanism could not be propelled by the flow of costly liquors, no matter how thirsty the assembly of carousing princes and dignitaries might have been. Master William was unable to build his fountain after the model of fountains fed by a perennial spring, as those devised since antiquity for private or public use. He had only to estimate the inclination of the underground conduits leading from the storeroom up to the mouths of his lions and dragons, in order to achieve a gentle and constant flow of the drinks into the ever ready silver bowls. Those pipes and conduits were probably made of leather, with sections of them in masonry, at the exclusion of lead or costly metals.¹⁰⁷

As to the bellows, it appears evident that it was impossible to produce by the simple means known in his day the thundering noise of the trumpeting angel that had not only to overcome the shouting of an intoxicated multitude and the *fortissimo* of the imperial orchestra, but to reach also the ears of the people concealed in the cellars and storerooms outside of the hall.¹⁰⁸

¹⁰⁷ Even in Europe metals such as lead, iron and copper were seldom used during the Middle Ages for the construction of fountains, which were generally fed through an aqueduct of thickly plastered masonry. Cf. Viollet-le-Duc, *Dictionnaire raisonné* etc., V, p. 529. Leather conduits were frequently used in antiquity for contrivances of that kind. Cf. the literature quoted above pp. 79, 80, nn. 77, 78. In the case of Master William's fountain no details are given about the tricks which permitted the beverages to rise to the top of the tree. The fountain certainly did not employ a pump of the kind occasionally described in the technological treatises mentioned below, p. 95 and n. 111 and represented in a miniature of *The Treatise of Al-Jazari on Automata* by A. K. Coomaraswamy, Boston, 1924.

¹⁰⁸ The water- and steam-blowers described in the technological treatises of the Middle Ages (cf. below p. 95, n. 110) were powerful enough for making large organs work with good acoustical results, but instruments of that kind and size were rare exceptions and never entirely automatic.

Master William learned by his own experience that the rudimentary device generally used in his day for the construction of organs or for the manufacturing of mechanical toys could not be successfully applied to an instrument of those unusual proportions. The technical means available in mediaeval and especially Oriental craftsmanship were inadequate for such an ambitious undertaking. The mechanical tools and manipulative tricks of the contemporaneous craftsmanship all over the world were still the same as those used since antiquity throughout the Middle Ages. Mangu Khan's fountain was built and worked with a minimum of the mechanical artifices used for the "Throne of Salomon" in Byzance, the magic tree of Bagdad, the turning ceiling in Nero's *Domus Aurea*, the mechanical wonders in Alexandria's Serapeion and the springs, animated statues and playthings of different kinds executed for the country places of the Roman emperors, nobles and snobs.¹⁰⁹

Up to the advanced thirteenth century all these contrivances consisted merely in various combinations of hydraulic and pneumatic tricks. Gears, wheels, clock-works, springs or somewhat complicated mechanical implements were scarcely used. The utmost efficiency and surprising results were attained by skilled engineers simply by an ingenious employment of pipes and conduits combined with a system of levers and—when music was wanted—with blowers and instruments. The primitive mechanical means required a lively manipulative imagination and a long training to which goldsmiths

¹⁰⁹ For the "Domus Aurea" cf. Svetonius, *Vita Caesarum*, Nero, Ch. XXXI. The "Serapeion" described by J. Burekhardt, *Die Zeit Konstantins des Grossen*, Part V. On the marvels of Roman country places cf. Daremberg-Saglio, *Dictionnaire des Antiquités* etc., art. "Villa" (insufficient).

were especially subjected. It is certainly in this field of craft that an old tradition of delicate and costly engineering was maintained for more than a thousand years until the technical improvements of the late thirteenth century introduced new structural elements and opened new horizons to craftsmanship and mechanics.¹¹⁰

Guillaume Boucher still belongs to the old tradition of artistic technology of which Byzance and the Mohammedan Middle East had been the guardians since antiquity. In fact there is nothing in Occidental mediaeval literature that can be compared with Al-Jazarî's technological encyclopaedia, composed in 1205/06 by this outstanding craftsman after twenty-five years spent at the court of the urtuqid sultan of Diar-Bekr on the Tigris, the old Roman and Sasanid cultural center of Amida.¹¹¹ Al-Jazarî devoted the ten chapters of the second section of his book to the construction of vessels and figures suitable for use at carousals, and explained in the fourth section how to build fountains and perpetual automatic flutes.¹¹² In doing so he enlarged the special treatise on the same subject composed in the ninth century by the Banū Mūsā in which this active family of Persian craftsmen perpetuated their knowledge and experience of apparatuses manufactured for the pouring of wine into ornamental and moving receptacles.¹¹³

¹¹⁰ Feldhaus, *op. cit.*, pp. 219-228 and for more details, Chappuis-Gelis, *Le Monde des Automates*, I, ch. 1.

¹¹¹ Recent literature and some interesting historical remarks on this branch of technology by Eric Schroeder, *Persian Miniatures in the Fogg Museum of Art*, Cambridge, Mass., 1942, pp. 21-27.

¹¹² Translated into German by E. Wiedemann and F. Hauser in *Islam*, Vol. VIII, 1918, pp. 55 ff. and 268 ff.

¹¹³ For these technical traditions in the East cf. the fundamental contributions of Baron Carra de Vaux, especially *Journal Asiatique*, Série VIII, tome XVII, 1891, pp. 287-322. For the Banū Mūsā cf. the corresponding article in *Encyclopaedia of Islam*.

Several other works of that kind were written during the Middle Ages in the Mohammedan cultural sphere.¹¹⁴ The authors of those treatises were artisans who had little theoretical interest in mechanics but had to satisfy the love of splendor and the extravagant whims of their artistical minded sovereigns. The comparatively numerous manuscripts preserved in several libraries of the Old World, the Arabic, Persian and Turkish versions of some of those works, and finally the linguistic eclecticism of their terminology give impressive evidence of the popularity in the Eastern world of that special branch of human activity in which the Christian peoples of the West did not actively participate. Presumably some of the Norman rulers of Sicily or Frederick II might have acquired a taste for those mechanical extravaganzas of exotic provenance and taste. In that case playthings of that kind would have represented one of the many aspects of the influence of Syrian, Egyptian and Byzantine workshops on Sicilian art, craftsmanship and courtly life.

The preference given to decorative mechanical contrivances by many califs, sultans and emirs of the Middle East, and later also the Mamelucks, may be explained by their particular psychological background and an ostentatious pretense determined by an ambitious spirit of emulation. In this way the numerous Mohammedan princelings scattered between the Levant and Central Asia contributed in keeping alive a special branch of the technical experience, knowledge and literature of the ancient world. All those treatises on sumptuary or—as the Greeks called them—thaumaturgical technology are adaptations, extensions and revised editions of the

¹¹⁴ Carra de Vaux, *Les Penseurs de l'Islam* (5 vols.), Paris, 1921-26, II, pp. 168-194.

standard works of classical authors on practical mechanics composed mainly by Philon of Byzance and Heron of Alexandria, and translated into Arabic after having served for centuries as textbooks for Greek, Roman and Byzantine artistic technology.¹¹⁵ In the treatises of these authors we already find the intermittent fountains, the organ blowers, the singing birds, the ornamental trees, lions and dragons which for more than a millennium were the delight of Oriental potentates and kept their artisans and scientists busy for many a generation.

In devising his tree with pipes, blowers, a trumpet, fixed ornaments and a movable figure, Master William transplanted into Eastern Asia a technical tradition initiated by Archimedes and Ktesibius, and handed down in late Greek and Mohammedan literature of the subject. It is more than probable that Villard de Honnecourt drew from the same sources the tricks and devices described in his sketch book and practiced by isolated artisans of Greek origin or traditions somewhere in the countries he visited in his roving life.¹¹⁶ But his projects were mere suggestions that he probably never executed. As to Master William, he might have learned something from the Persian and Turkish artisans who worked for the Mongolian nobility and the imperial household. He could hardly have achieved his masterpiece without the assistance of the learned and experienced Mohammedan craftsmen who represented in Iran and Turkestan the last ramifications of the Archimedean and

¹¹⁵ Cf. Carra de Vaux, "Le Livre des Appareils Pneumatiques et des Machines Hydrauliques par Philon de Byzance" in *Notices et Extraits des Manuscrits de la Bibliothèque Nationale*, Paris, Académie des Inscriptions et Belles Lettres, Vol. XXXVIII, 1903, pp. 27-235 (Arabic text, translation, introduction and glossary). On Heron of Alexandria cf. the corresponding article in Pauly-Wissowa's *Real-Encyclopædie des klass. Altertums*.

¹¹⁶ R. II. Hahnloser, *Villard de Honnecourt*, pp. 24, 47, 49 etc.

Hellenistic cultural traditions.^{116a} Some of them probably coöperated with him as technical assistants and advisers in the same workshop where the representatives of other Asiatic tribes and nations realized the Mongolian concepts of universal coöperation of which Mangu Khan's magic fountain was the artistic symbol.

7.

Yet, in spite of the importance of Persian or Mesopotamian craftsmen in handing down the experiences and secrets of antique technology, and with all the esteem Mangu Khan showed for some learned men of the Islām, he did not entrust to one of his Mohammedan artisans the execution of the most noteworthy piece of workmanship existing in the imperial precinct. The reason for the preference given to the French master consists in all probability in the fact that the emperor rightly considered his magic fountain as a work of art rather than as a technological achievement. In that case he would have confirmed what we know about the Mongolian appreciation of the leading races in the fields of the fine arts and the sumptuary crafts.

After a short but reliable report of Tamerlane's policy in concentrating in his capital of Samarkand the best of the innumerable master-workmen of Asia, Ruy González Clavijo, the Spanish ambassador, affirms that in the courtly environment of that luxury-loving sovereign "the craftsmen of Cathay are reputed to be the most skilful by far beyond those of any other nation; and the saying is—he adds—that they alone have two eyes, that the Franks indeed may have one, while the Moslems are but a blind folk."¹¹⁷

^{116a} Marco Polo mentions the "great craftsmen" of Turkestan (cf. Yule, *The Book etc.*, I, p. 181 and 187).

¹¹⁷ Clavijo, *Embassy to Tamerlane*, London, 1928, p. 289.

This jocose and significant expression of a typical proverbial character is senseless in Tamerlane's environment where Islamic art and craftsmanship notoriously attained the most magnificent expansion, comparable only with the greatest epochs of their former development. Chinese and European influence was comparatively limited in the Timurid period of Persian art.¹¹⁸ After the splendid accomplishments of Persian painters and artisans at the court of the Il-Khans and the renaissance of Mohammedan art in Bagdad and Egypt during the fourteenth century, that proverbial saying sounds like an old commonplace thoughtlessly repeated by people unaware of the changes and innovations occurring under their very eyes and with their own contributions. Popular and proverbial judgments about foreign nations and different races were always tenacious and everywhere difficult to eradicate.

The appreciation of Chinese, European and Islamic art heard by the Spanish ambassador undoubtedly reflects a very old Mongolian opinion preserved with other prejudices and habits by the conservative elements of Central Asiatic society. What in the first years of the fifteenth century sounds meaningless and even preposterous was perfectly justified at the epoch of Mangu Khan, when Chinese arts and crafts expanded in High and Central Asia on a scale not comparable with the influence of the Mohammedan Middle East. At that period the Western Asiatic countries had almost exhausted their creative artistic vigor in the architectural and decorative field. Even in Central and Eastern Asia the Moslems remained what they frequently had been in the course of their civilization; namely, the keepers of

¹¹⁸ Cf. E. Blochet, *Les Enluminures des manuscrits Orientaux* etc., pp. 45 ff. and *passim*.

different foreign traditions and the successful mediators in the cultural and artistic intercourse between the East and the West.

It was in that way that the Archimedean tradition of thaumaturgical mechanics wandered further East and found its final Asiatic materialization in one of Peking's imperial palaces. Mangu Khan did not enjoy for long his magic fountain manufactured with so much trouble and expense in Master William's workshop. Three years after its completion he moved his capital to Keipingfu, Marco Polo's Shangtu, near the Dolon-nor, and made of his Mongolian frontier-place the stepping stone for his conquest of China.¹¹⁹ We do not know whether the Great Khan carried along with his court and officials the numerous artisans of his apanage and the French master with his workshop. The marvels of the new capital came into being mainly in the time of Kubilai Khan when the new emperor made of Shangtu his summer residence. But the shifting of the empire's capital to the East was a definitive step which lowered Karakorum to the rank of a provincial center and finally disrupted the unity of the Mongolian empire.

Accordingly, the arts and crafts of Asia found their abode in the two new centers of the decentralized Mongolian empire: in the residential camps and the capital of the Il-Khans in Persia on the one hand, and on the other hand, in the Tartar city of Peking, called Khanbaliq by the Turks and Europeans, and Tai-du by the Chinese.¹²⁰ Among other old Mongolian traditions transferred to the Chinese court ceremonial was the abundant distribution of liquors at the solemn receptions given by the emperor on fixed religious and

¹¹⁹ On this place and literature on it cf. Yule, *The Book* etc., I, pp. 304 ff.

¹²⁰ *Ibid.*, pp. 374 ff.

national holidays. For that purpose Kubilai had built in the main hall of his new residence a large buffet "in the form of a square coffer" and described by Marco Polo as "a beautiful piece of workmanship exquisitely wrought with figures of animals, finely carved and gilt."¹²¹ From a large vessel of pure gold situated in the middle of the structure wine and beverages flavored with fine and costly spices flowed down into four smaller vessels, one at each corner. The liquors were served in large pitchers holding drinks for eight or ten persons and placed upon small tables after refilling at one of those receptacles.

Apparently this fountain worked without any mechanism whatsoever, but the general idea of this towering buffet corresponds in some essential points with Master William's contrivance. Its symbolism is even more evident than in the complicated structure of Mangu Khan's magic tree. Undoubtedly the large vessel at the center and the smaller ones at the four corners reproduce the five basic concepts of the Chinese cosmology, here intended as the spiritual foundation of Kubilai's universal power.¹²² It is a striking and characteristic fact that at the political center of the empire, represented by the *Ta-Ming-Tien* as the main reception hall, a symbolic monument of religious and philosophical significance again was intended for the distribution of beverages drunk in connection with the worshipping of the emperor as the Son of Heaven.

This circumstance confirms the interpretation of Mangu Khan's magic fountain as a monument intended

¹²¹ *Ibid.*, p. 382.

¹²² On these principles and political implications cf. Alfred Forke, *World-conception of the Chinese*, London, 1925, especially pp. 227 ff. The architectural expressions of this pentalogical cosmology are especially considered by P. Carus, *Chinese Thought*, Chicago, 1907, pp. 41.

to express the religious and political implications inherent in every structural and ornamental detail. In its texture of marks and symbols the pentalogical Chinese system of thought and religion had an important part. At Karakorum the number of the vessels and beverages was the same as later in Peking, and Master William's four dragons on the top of the tree were certainly directed toward the four quarters of the world just as were the receptacles of Kubilai's monumental fountain.¹²³

Marco Polo did not specify its ornamental features, but we know a little more about the great jar which replaced, thirty years later and in the same hall, the "buffet" described by the Venetian traveler. Friar Odoric of Pordenone, who lived in Peking during the third decade of the fourteenth century, saw "in the midst of the palace a large pine cone (*una magna pigna*), more than two paces in height, entirely formed of a certain precious stone called *merdicas*, all hooped round with gold, and in every corner thereof is a dragon (*serpens*) represented as in act to strike most fiercely."¹²⁴ In this important piece of workmanship the traditions of Master William's fountain seem to be

¹²³ The five elements plus the four points, or seasons, makes nine the global numerical symbol of Chinese and Mongolian cosmology. Marco Polo reports that Kubilai had also a movable buffet which was put "in the middle of the hall pavement, at a distance of some ten paces from his table, and filled with wine, or other good spiced liquor such as they use." This buffet perpetuated the old Mongolian tradition as represented in the miniatures illustrating the Parisian manuscript of Rashid-ed-Din's world chronicle. In the hall of Shangtu, where this movable buffet was used, the "enchanters . . . cause the cups to move from their place without being touched by anybody, and to present themselves to the emperor." (Yule, *The Book etc.*, I, p. 302.) This is evidently the Oriental form of convivial automatism in contrast to the Western way of distributing drinks by mechanical contrivances.

¹²⁴ B. Odoricus de Portu Naonis, *Relatio*, SF, p. 473; H. Yule, *Cathay etc.*, II, pp. 220 ff.; H. Cordier, *Les Voyages en Asie du Bienheureux Frère Odoric de Pordenone*, Paris, 1891, pp. 407 ff.

very much alive. The huge pine cone appears as a substitute for the tree. The golden serpents at the four corners here again covered the conduits by which drink was conveyed from the court of the palace into the jar and "the many golden goblets from which those drink who list."

We do not know whether this late imitation of Mangu Khan's magic tree showed some technological improvements as compared to the rudimentary makeshifts used at Karakorum. As a matter of fact, reliable Chinese sources confirm the lasting interest of the Genghizide emperors in the mechanical achievements of Western engineers. On the façade of the same imperial "Hall of Great Brightness" a water clock with a lantern showed a little man coming forward at fixed times and exhibiting a tablet which announced the hours.¹²⁵ In the interior, near the drinking fountain, there was a pneumatic organ connected, by means of a tube, with two peacocks sitting on a cross-bar, and when it played, the mechanism caused the peacocks to dance.¹²⁶ Odoric of Pordenone adds that the peacocks were many, "and when the Tartars wish to amuse their lord then they go one after the other and clap their hands; upon which the peacocks flap their wings, and make as if they would dance. Now this must be done—the friar concludes—by diabolic art, or by some engine underground."¹²⁷

After having seen sundry devilish tricks played by the sorcerers of the imperial court, Friar Odoric did not realize that these contrivances were typical products of the thaumaturgical technology characteristic of the By-

¹²⁵ E. Bretschneider, *Recherches Archéologiques sur Pékin*, p. 49.

¹²⁶ *Ibid.*, p. 50

¹²⁷ SF, p. 473; Yule, *Cathay*, II, p. 222. For Odoric's expression ("vel arte diabolica vel ingenio quod sub terra sit") cf. the author's *Storia letteraria delle scoperte geografiche*, Florence, 1937, p. 96, n. 50.

zantine and Mohammedan traditions of Persia and the Near East. Pneumatic organs of the kind described were installed in the palaces of Constantinople and sent by Byzantine emperors as especially precious gifts to Western sovereigns.¹²⁸ Frequently used in China for decorative purposes and as symbols for dignity and authority, peacocks were also particularly favored by Mohammedan engineers for their mechanical toys contrived for the delight of Oriental chieftains and kings.¹²⁹ These animated birds are a characteristic feature of Al-Jazarî's technological encyclopaedia, as were the fountains for wine and drinks placed in different halls of the new Peking residence.¹³⁰

Al-Jazarî had also explained the construction of those water clocks which represented one of the most characteristic and lasting achievements of Greek mechanics, handed down by the same traditions of Byzantine and Mohammedan craftsmanship.¹³¹ Technology of the animated-puppet type developed by Heron of Alexandria

¹²⁸ J. Ebersolt, *Les Arts Somptuaires de Byzance*, pp. 52, 56 etc. L. Carrington Goodrich, *A Short History of the Chinese People*, New York, 1943, p. 176, mentions an organ with reeds of the single beating type taken to Peking around 1260 by envoys from Byzantium or Bagdad.

¹²⁹ For representations of peacocks in Eastern art cf. the remarks and bibliography in the notes to plate 10, pp. 117, 118. For peacock contrivances in the Mohammedan technology cf. E. Wiedemann-F. Hauser in *Islam*, VIII, pp. 55 ff.

¹³⁰ It seems that there were jars filled with wine in different halls of the Peking residence (cf. E. Bretschneider, *Recherches Archéologiques* etc., pp. 49 ff. and *passim*). This was certainly the case also at Karakorum, where drinking bouts were also organized outside the main reception hall. Wine jars of different size and number were situated everywhere in Tamerlane's residence.

¹³¹ Cf. E. Wiedemann—Fr. Hauser, "Ueber die Uhren im Bereich der Islamischen Kultur" in *Nova Acta: Abhandlungen der Kaiserlichen Leopold-Karolinischen Deutschen Akademie der Naturforscher*, Vol. C, 1915, N. 5. On peacock-apparatuses and clocks cf. especially pp. 141 ff. where the model of the contrivances manufactured in Peking can be easily recognized.

and his school is said to have been introduced into China in the third century and practiced at the court of the Wei dynasty by a mechanician famous for his skill.¹³² But it was only at the Yuan epoch that such a variety of mechanical achievements could have been attained on a large scale and with such great success. The particular appreciation of those contrivances by Chinese experts and amateurs is documented by detailed descriptions of some masterpieces handed down in the official annals of the empire.¹³³

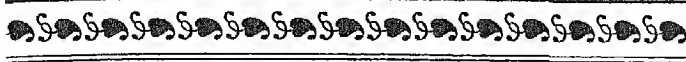
It was only in the cosmopolitan environment of a Mongolian ruler that this extravagant kind of workmanship could prosper and develop. The greatest contributions to sumptuary technology in the Far East are certainly due to specialized craftsmen from Turkestan and Persia settled in China's borderlands since the conquests of Genghis Khan and, later on, a common sight in Peking at the epoch of Kubilai and his immediate successors. William the Parisian played an important part in this artistic and cultural development as a man who successfully inaugurated these characteristic traditions among the Tartar rulers of Mongolia and China. His accomplishments were not forgotten and they cer-

¹³² The name of this craftsman was Ma Chün, as recorded by H. A. Giles, *A Chinese Biographical Dictionary*, London-Shanghai, 1898, p. 565. Cf. the article of H. Chatley, quoted above p. 61, n. 40. Water clocks of the Hellenistic type are said to have been used in China at different epochs. On musical and astronomical instruments introduced into China during the Yuan epoch cf. L. Carrington Goodrich, *op. cit.*, Ch. VI. As to Ma Chün, the Chinese Biographical Dictionary (*Chung Kuo Jiu Ming Ta Tzu Tien*) reports that he invented a "turn-over mill" which could be turned over by children for irrigation as an automatic water supply machine. He is also credited with perfecting an automatic crossbow and some more useful devices. Ma Chün lived between 221 and 264. The most noted Chinese hydraulic engineer at Kubilai's epoch was Kuo Shou-Ching.

¹³³ Cf. E. Bretschneider, *Recherches Archéologiques* etc., note 82.

tainly helped to keep the "Francs" in high esteem as a people that could compete with the Chinese in the fine arts and surpass them in mechanical skill and workman-like ingenuity.¹⁸⁴

¹⁸⁴ De Mély's opinion (cf. above p. 29, n 74) that the activity of Guillaume Boucher in Mongolia may explain the supposed French influence on the contemporaneous Asiatic arts is only a vague supposition. The conjecture of John C. Ferguson (*Survey of Chinese Art*, Shanghai, 1939, p 127) that the Chinese designation of enamel as *fa lan* might be the corruption of the master's name Guillaume sounds rather far-fetched and even fantastic. Nevertheless it is quite possible that the Parisian master produced the first enamels manufactured in Asia when working in his busy workshop at Karakorum. Enamels were unknown in the Far East before the Yuan epoch and the Chinese term *fa lan* clearly designates the Western origin of the product.



III. APPENDIX

NOTES TO THE ILLUSTRATIONS

LIST OF ILLUSTRATIONS

- Plate 1. Mangu Khan and his family.
- “ 2. Interior View of Peking's T'ai Ho Mén.
- “ 3. Mangu Khan's Magic Fountain as reconstructed by Bergeron, 1735.
- “ 4. The Enthronement of Ogudai Khan.
- “ 5. An organ in form of a tree (Twelfth Century).
- “ 6. Villard de Honnecourt reading desk with movable eagle
- “ 7. Mechanical contrivances from Villard de Honnecourt's *Livre de Portraiture*.
- “ 8. Villard de Honnecourt's Lion.
- “ 9. Prester John. Florentine woodcut, 1493.
- “ 10. Al-Jazari's mechanical peacocks.

PLATE 1

It seems fitting to show here a portrait of Mangu Khan, Guillaume Boucher's protector, as represented with his first wife Cotata Caten and his sons and daughters in ceremonial courtly dress. The scene is painted in a miniature of the Parisian manuscript of Rashid ad-Din's *Jâmi al-Tawârikh* (Bibliothèque Nationale, Suppl. Persan 1113) and is reproduced from F. R. Martin, *The Miniature Paintings and Painters of Persia, India and Turkey from the 8th to the 18th Century*, London, 2 vols., 1912, II, plate 44.

Painted in Tabriz half a century after the emperor's death, the portrait does not render his traits, but the whole page is very interesting for the knowledge of Mongolian dress and the evidence of Chinese influence on Persian painting in the early fourteenth century. It seems probable that the miniature was painted after a Chinese original, at least in some striking details. Several other miniatures of the same manuscript reveal a direct Chinese influence or even collaboration.

This illustration offers an iconographic commentary to Friar William's description of Mongolian courtly costumes and etiquette. The friar observed that the Tartars always tie the gowns on the right (cf. SF, p. 182; Rockhill, p. 73), as do the Chinese, Japanese and Tibetans. The crowns worn by the emperor and the princes are the same as those shown in the ceremonial portraits of Genghis and Ogudai in the same manuscript (cf. Plate 4). They are not characteristic of the Chinese imperial head-covers and probably represent a typically Mongolian insignia of an eclectic type. It may be mentioned in this context that a Mongolian term for crown (*titim*) derives from Greek *διάδημα*, like our "diadem," and was introduced into the Mongolian language through early Iranian mediation (cf. Berthold Laufer, *Sino-Iranica*, Chicago, 1919, p. 573).

The crowns depicted in the miniature are probably of the same type as those Friar Odoric mentioned in his description of the ceremonial receptions he attended, around 1330, at the imperial court of Peking. All of the "barons" wore crowns, a fact the friar reported three times (cf. SF, pp. 474 and 480, pars. 1 and 2; Yule, *Cathay*, II, pp. 237, 240).

As to the ladies, our miniature shows the empress wearing a crown like those of Mangu Khan and his sons, while the princesses

"have a headdress which they call *bocca*," as Friar William of Rubruck reports (SF, p. 182; Rockhill, p. 73). This is the *bogtak* the missionary describes with the skill of a fashion reporter as "made of bark, or such other light material as they can find, and it is big as much as two hands can span around, and is a cubit or more high, and square like the capital of a column. This *bocca* they cover with costly stuff, and it is hollow inside, and on top of the capital, or the square on it, they put a tuft of quills or light canes also a cubit or more in length. And this tuft they ornament at the top with peacock feathers, and round the edge (of the top) with feathers from the mallard's tail, and also with precious stones. . . . This *bocca* looks like a helmet, and the tuft above it is like a lance."

This headdress stirred the curiosity of all the missionaries. John of Pian del Carpine described the *bogtak* minutely (*Ystoria Mongalorum*, II, 5; SF, p. 34; Rockhill, p. 73, n. 2). Friar Odoric saw it on the heads of the princesses of the court of Peking (SF, p. 473). He was less interested in this detail but noticed that the feathers were of cranes and that the pearls all around the hat were "the biggest and most beautiful in the world." Vincent of Beauvais describes the *bogtak* in his famous *Speculum historiale* (bk. XXIX, ch. lxxxv, 412b), but does not mention it by its name. Cf. Rockhill, p. 73, n. 2.

All these descriptions prove the reliability of the details shown in our miniature and in most of the subjects depicted in that splendid manuscript.

PLATE 2

This interior view of Peking's T'ai Ho Mên, or Gate of Supreme Harmony, published by O. Sirén, *The Imperial Palaces of Peking* (3 vols.), Paris-Brussels, 1926, I, plate 30, may appear anachronistic for the illustration of a similar building erected in the first half of the thirteenth century in far-away Karakorum (cf. above, p. 47). In fact, this famous hall of Peking's forbidden city was reconstructed or repaired by the last Empress Dowager of China, between 1887 and 1890. But this modern hall only replaced an earlier structure erected during the Ming dynasty and which, on its part, faithfully reproduced a ceremonial hall of an earlier era.

The T'ai Ho Mên, with its two enormous bronze lions on the front, its three flights of stairs leading up to the terrace, the decoration of dragons and other symbolic animals and the large

naves divided by a double row of tall columns, resembles very closely the ceremonial buildings described by Marco Polo (Yule, *The Book* etc., I, pp. 362-72) and corresponds in all its structural details with Rubruck's description of the hall of Karakorum. Even looking at this picture of a modern building, one can understand how the friar had the feeling of being in a mediaeval church.

The actual T'ai Ho Tien in front of the "Gate of Supreme Harmony" and corresponding to the Ta ming tien or "Hall of Great Brightness" of Marco Polo's epoch, was the proper place for the great ceremonies on New Year's Day, the day of Winter Solstice and on the emperor's birthday as described by the Venetian and the Franciscan travelers. The structure is very similar to that of the Tai Ho Mên, but larger, more spacious and imposing, profusely decorated with Imperial Dragons. Although constructed in the seventeenth century this building also preserves the characteristic feature of the mediaeval ceremonial halls adopted by Genghis' successor as soon as a stable residence was established for the Mongolian emperors. Cf. Sirén's *op. cit.*, I, plate 44.

PLATE 3

This picture shows the reconstruction of Mangu Khan's magic fountain as described by Friar William of Rubruck and engraved by an anonymous chalcographer for Pierre Bergeron's *Voyages faits principalement en Asie*, published at The Hague in 1735. The lively illustration faithfully reproduces all the details enumerated by the missionary and shows in its background a fantastic image of Mangu Khan sitting on his throne like a Buddha, but stretching out his right hand to the butler who carries the cup to him while another butler goes down the steps on the opposite side.

The architecture and the costumes of the attendants are no less fantastic and were probably inspired by one of the very popular works on Eastern Asia printed in the Netherlands in the second half of the seventeenth century, as for instance: Joan Nieuhof, *Het Gezantschap der Neêderlandtsche Oost-Indische Compagnie* etc., Amsterdam, 1665, and last reprinted in 1693; Athanasii Kircheri, *China . . . Illustrata*, Amsterdam, 1677; O. Dapper, *Gedenkwerdig Bedryf der Nederladsche Oost-Indische Maetschappyye* etc., Amsterdam, 1670 (English edition, London, 1671). On these

works and illustrations, cf. Otto Pelka, *Ostasiatische Reisebilder im Kunstgewerbe des 18. Jahrhunderts*, Leipzig, 1924.

Our illustration shows the fountain erected outdoors in the palace courtyard, while Friar William correctly reported that it was situated "in the entry of the great palace" and "beyond the middle door on the inside" (cf. SF, p. 276; Rockhill, pp. 209 f.).

On Pierre Bergeron's life, work, sources and editions cf. *Biographie Universelle*, Vol. IV, p. 19.

PLATE 4

Miniature from the Parisian manuscript of Rashid ad-Din's *Jâmi al-Tawârikh* (Bibliothèque Nationale, Suppl. Persan 1113). This illustration was first published by Edward G. Browne, *History of Persian Literature under Tartar Dominion*, Cambridge, 1920. It represents the enthronement of Ogudai, the son and successor of Genghis Khan.

The courtly scene is dominated by the large tree which covers the Chinese throne of the emperor. He is surrounded by Mongolian princes whose hats show the three feathers mentioned by Haytun as a special mark of imperial nobility. Cf. above note 75.

In front of the throne is a table with three decanters, instead of the four shown in a miniature of the same manuscript reproduced by F. R. Martin, *The Miniature Painting* etc., Vol. II, plate 43, and representing Ogudai and his wife at a reception of Chinese ambassadors.

The present scene is typical of the many portraits of Mongolian sovereigns painted by Persian artists of the Il-Khani and Timurid periods. Apart from the illustrations of the manuscripts mentioned above and reproduced by E. Blochet, *op. cit.* and F. R. Martin, *op. cit.*, a Persian manuscript written in 1438 (Paris, Biblioth. Nation., Suppl. Persan 206) and containing Juwayni's *Tarikh-i-Jahân-gushâ* or "History of the World Conqueror," shows some interesting portraits of Genghizide rulers.

Although painted more than a century after the ms. 1113 of Rashid ad-Din's chronicle, the miniatures of the ms. 206 reveal an archaic type of illustration and evidently reproduce an older model still belonging to the thirteenth century. Juwayni's book preceded by almost a generation the *Jâmi al-Tawârikh* into which Rashid ad-Din inserted it as an essential section of his Mongolian history.

Mangu Khan's portrait in that manuscript (cf. Blochet, *op. cit.*, plate 41) has in its background a large and leafy tree. The emperor is shown stretching out his hand for the cup presented to him by the butler. In front of the throne there is a table with the drinks. To the left of the scene a lute-player sits on the ground. In spite of its age that miniature represents one of the most authentic and complete scenes of old Mongolian courtly and private life.

Some miniatures of the Timurid epoch (1335-1502) reproduced by Blochet and F. R. Martin contain fine representations of courtly drinking parties and show a streaming fountain replacing the old fashioned buffets. Those courtly scenes correspond in the whole with Clavijo's description of the reception ceremonial around 1400 (cf. above p. 53). A Turkish manuscript of 1526 described by Blochet (*op. cit.*, p. 101, plate 51) shows that at this advanced post-Timurid epoch the symbolic tree of the Mongolian tradition had disappeared from those scenes and probably also from the courtly symbolism and decoration.

PLATE 5

This picture of an organ in the form of a tree refers to the literary traditions of those costly playthings described above, pp. 93 ff. The "*arbor fusilis*" designed in the St. Blasien manuscript of the legend of Alexander the Great has been reproduced also by Feldhaus, *Die Technik der Antike und des Mittelalters*, 1931, and A. Schultz, *Das Hofische Leben zur Zeit der Minnesinger*, I, p. 97. But neither has the manuscript been described nor the title of the text ever mentioned. The inscription handed down by Barbier de Montault (cf. above p. 88, note 98) is probably incorrect. It reads: "Arbor fusilis de qua in Alexandri gestis legitur quum in imis inspiratur per ora avium dulces et diversas emitit voces."

PLATE 6

Of all the many structures and projects invented or illustrated by Villard de Honnecourt the one shown here is, on the whole, the most similar to Boucher's contrivance described by William of Rubruck (cf. above p. 63 ff.). To that construction Hahnloser

devoted several pages of his book on *Villard de Honnecourt*, pp. 33-37. The construction was intended as a monumental reading-desk for the recitation of the Gospel and consisted in a plate reposing upon the back of four dragons and from which three shafts of columns arise in the form of highly stylized trees. On top another plate bears the probably movable eagle described in the following note.

The present drawing is very schematical and incomplete. The description to the right of the design does not correspond in all details with the structure. The dragons intended to cower upon the branches are represented in plate 21 of Hahnloser's edition. The whole work was supposed to be constructed of metal and expresses the new trend of industrial art developed at Villard's and Boucher's epoch in France in connection with the increasing interest in technological improvements.

PLATE 7

This page of Villard de Honnecourt's "Album" (Hahnloser, *op. cit.*, plate 44) contains several technological projects which show the congeniality of that famous artist with his fellow-countryman Boucher. The first drawing on top (left) shows a hydraulic saw-engine, the second (right) pretends to be an infallible cross-bow. The contrivance to the left of the central row was invented by Villard for the purpose of "making an angel turn his finger toward the sun." It represents one of the first attempts to substitute a mechanical clockwork for the hydraulic devices of the Heronian and Vitruvian type.

The master's leading idea was to apply to his mechanical angel the principle of weight propulsion already known in the twelfth century. But the project is clumsy and the mechanism inefficient without human intervention. It cannot be compared with the skill and refinement of the automata described by Al-Jazari whose historical remarks grant a reliable survey of these mechanical developments since Archimedes (cf. E. Wiedemann, *Über Uhren im Bereiche der Islamischen Kultur* etc., pp. 179 ff. and *passim*). See above pp. 95 and 104, n. 131.

The windlass to the right of the middle row serves for the lifting of heavy loads and is not of a particular interest in this context. *Per contra*, it is the eagle at the bottom that attracts our

attention. Villard's description, in verbal translation, is as follows: "With that the head of an eagle can be turned toward the diacon when he reads the Gospel" (*Par chu fait on dorer la teste de l'aquile vers le diachene kant list la vengile*).

Moving birds of that type were much appreciated in mediaeval France. In this case, also, the rudimentary device could only work with the help of a person pulling the rope. An eagle of this kind is shown on top of the reading desk described by Villard (cf. plate 6).

PLATE 8

Guillaume Boucher's "lions" which decorated his fountain at Karakorum (cf. above p. 79) remind one of Villard de Honnecourt's famous "lion" reproduced here, the portrait of which is among the most puzzling details of his "album" (cf. Hahnloser, *op. cit.*, plate 48 and pp. 147 ff.). The works of the two contemporary French masters are particularly interesting because lions are not frequent in French decorative sculpture of the Middle Ages. It was in Italy that these animals became popular and one of the most common and typical ornaments of Romanesque cathedrals and secular buildings. It is probable that the type of decoration called "a lioine" in twelfth-century France belongs to Roman buildings of the Gauls and particularly to that kind of mosaic designated in Provençal as *obra bestiaría*.¹

Thus the "lions" of Karakorum and Villard de Honnecourt's "Leo" are rare examples of French counterfeits of the king of the animals. Moreover, if Boucher's four "lions" were in all probability Chinese symbolic tigers, Villard's "lion" appears as a rather hybrid animal of a marked decorative and highly stylized type.

Yet Villard pretended to have portrayed a lion from nature and wrote that "this is a lion as it is seen in front; and you should know that it was counterfeit from life."² This remark stimulated lively discussions among the historians of mediaeval art because the drawing is anything but a naturalistic repre-

¹ On this mediaeval terminology cf. the book quoted above, p. 75, n. 65, pp. 44-47.

² "Ves ci .l. lion si com on le voit p(ar) devant et saiez bien q(u)'il fu contrefais al vil."

sentation of a lion. It helps us also to understand how Friar William of Rubruck took Boucher's tigers for lions.

There is no reason to question Villard's good faith. Lions were shown in mediaeval fairs or kept alive as symbolic animals in courts and cities, particularly in Italy where they are the most common heraldic animals. In France the lion had been made popular by Crestien de Troyes' *Yvain or le Chevalier au lion*, where the story of that beast is also associated with a magic fountain.⁴ Villard de Honnecourt certainly met one of those fair lions in one of his travels in France and Central Europe. That his portrait then took the shape of a sculptural stylization of a living animal is another question which finds its solution in a different range of ideas.

The strong frontality, the bodyless structure, the ornamental mane, fur and claws, the canine ears, the rigid look, the symmetrical jaws and teeth efface completely every naturalistic detail and transform the living animal into a sketch of a statue. Villard looked at his living model with his mind full of artistic and ornamental reminiscences which then determined his personal vision of the animal. As we all do, Villard saw in reality what he had previously learnt to see. At this point the problem of his lion becomes a philosophical one which transcends the scope of the present essay. But it seems appropriate to inquire about the artistic models that prompted the French master to reshape unconsciously a living lion almost in the form of a decorative chimera.

As such his drawing does not show the characteristic traits of Romanesque or Gothic art. Just like many other of his sketches in the same *Livre de Portraiture*, the present one is evidently inspired by late antique monuments in which lions appear as ornamental details. Many of them are scattered throughout the Mediterranean area and became the models of the animals sculptured in the Romanesque era in Northern Italy and Southern France. The famous lions of the commemorative pillar of Aśoka in Sarnāth, India, give evidence of the spreading of this Hellenistic sculptural type in the Eastern sphere of art and decoration.⁴ A monograph devoted to this subject matter and including the different ramifications of this motif up to China would reveal

⁴ Editions and literature in K. Voretzsch's *Introduction to the Study of Old French Literature*, Halle, 1931, pp. 297 f.

⁵ Reproduced by Otto Fischer, *Die Kunst Indiens, Chinas und Japans*, Berlin, 1928, plate 144.

interesting connections and traditions in the history of craftsmanship and ornamentation.

There can be no doubt that the lions of Karakorum were also of this hybrid type in which an observer could discover a lion or a tiger or something else, according to what he was interested in.

PLATE 9

The Florentine woodcut of this plate adorns a brief popular poem on the marvels of Asia composed by Giuliano Dati in 1493, shortly after the discovery of America. The poem followed immediately Dati's translation into Italian verse of Columbus' first letter, printed in Rome, in 1493. Only two copies of the poem on Prester John have been preserved, one in the British Museum, the other in the University Library of Genoa, Italy.

This picture of Prester John on his throne shows one of the very rare representations of the tree in a hall and is probably the last one of an old tradition of religious and secular iconography. The first description of a tree growing in a sanctuary occurs in the spurious "Letter of Alexander the Great to Aristotle" and is connected with the cult of the Bacchus Indicus, as described in Philostrat's poem on *Apollonius of Tyana* (Book II, Ch. 2 ff.) and in Nonnus' *Dyonisiaca* (Book XVI). Whether these late antique authors and the legend of Alexander the Great perpetuate in Hellenistic counterfeits some Indian myths and cults is still open to question and might stimulate an Indologist to investigate those supposed connections and traditions. Cf. the essay quoted above, note 100.

Since Boucher's tree served to cover the conduits for intoxicating liquors, he probably gave its foliage the form of vine-leaves. In that way he would have materialized what he certainly knew about the legendary tree in the palace of Porus, King of India, as described in the very popular French *Roman d'Alixandre* of the end of the twelfth century, known to all Frenchmen who listened to the street-singers telling the adventures of the Macedonian in Asia. This prototype of Master William's tree is described as follows:

"Au chief de cele chambre truevent un susterin
 Ques maine en une trelle qui fu faite a or fin.
 D'Ethyope la firent orfevre barbarin

Si come lor ensequirent quatre clere sarasin;
 Une vigne i ot mise par issi grant engin,
 Les fuelles sont d'argent, ce truis al parchemin,
 De jagonies les vis,¹ de cristal li roisin;
 Ce samble ques esgarde qu'il soient plein de vin."

(Cf. *The Mediaeval French Roman d'Alexandre*, Elliott Monographs edited by E. C. Armstrong, Vol. 37, Princeton, N. J., 1937, p. 163, vv. 918-927.)

Translation: "At the head of the hall they find a golden trellis for vine. It was made by exotic goldsmiths from Ethiopia as taught by four Saracen scholars. A vine-tree was planted there with great mechanical skill. The leaves are of silver, as I find in my manuscript. The steps (better version: the trunk) are (is) of precious stones, the grapes of crystal. To those who look at them they seem full of wine."

The old pagan symbolism of the vine-tree has been replaced by the Biblical symbolism of the tree of life, etc., as frequently represented in early Christian art and Jewish iconography. Cf. J. Leveen, *The Hebrew Bible in Art* (2 vols.), London, 1944, espec. chapter II.

PLATE 10

This miniature—reproduced from F. R. Martin's work on *The Miniature Painting and Painters of Persia* etc., Vol. II, p. 4—represents four peacocks painted in the old Egyptian style and comes from a famous manuscript of Al-Jazari's technological encyclopaedia (cf. above, p. 95, n. 112). Martin attributed the manuscript to the epoch of the Ortuqid Sultan Nūr al-Din Muhammed, who died in 1185 of our era. But Al-Jazari terminated his work under the reign of Nūr al-Din's son and successor Salāh al-Din, who died in 1222. Nor is the manuscript the original of the famous mechanician. On the date of composition, cf. E. Wiedemann in *Nova Acta: Abhandlungen der Kaiserl. Carolinischen Deutschen Akademie der Naturforscher*, Halle a. S., 1915, pp. 48 ff. Discussion of the date of the manuscript (attributed by Blochet to the fourteenth century) in *Burlington Magazine*, Vol. XXIII, 1913, pp. 49-50.

The four peacocks illustrate the minute description of a contrivance very similar to that seen by Friar Odoric in Peking (cf.

¹ There is a better version *just* (trunk) in Michelant's edition of *Li Romans d'Alexandre*, Stuttgart, 1846, p. 275, v. 11.

above, p. 102, n. 124). The device worked as a hydraulic clock, with the peafowl on top moving every half hour from one to the other end of a transversal rod of metal. Then the two peacocks in the center start wrangling and ejecting loud yells, while the fourth peacock at the bottom spreads his tail. The technical details of the device are described in six illustrated sections of the treatise's sixth chapter (Wiedemann, *op. cit.*, pp. 141-150).

Peacocks were always considered in China as rare birds and were known from paintings rather than from nature (cf. E. Bretschneider, *Mediaeval Researches*, I, p. 149). Marco Polo—who was always interested in animals—never mentioned them in his description of Eastern Asia. He saw “very beautiful peacocks larger than ours, and different” in India, a country where they “are more plentiful than anywhere else” (cf. H. Yule, *The Book of Marco Polo*, II, pp. 376 and 355). India is indeed the country of origin of that fowl which spread from there to Western Asia and the Mediterranean area, especially after Alexander the Great's expedition. On the Greek and Buddhistic symbolism of the peacock as well as on the myths and legends connected with it, cf. H. Lothar, *Der Pfau in der altchristlichen Kunst*, Leipzig, 1929, especially Chapters II and III.

According to Al-Jazari's description, the mechanical peacocks were of gilt copper. Those seen by Friar Odoric in Peking are described as made of gold, and a reliable Italian version of the missionary's report tells of “many enameled peacocks” (cf. II. Yule, *Cathay*, II, p. 357, n. 4). This would be one of the oldest hints at enameled metal in China.

There are numerous decorative peacocks in Western Asiatic art. A charming picture of a peacock, almost contemporary with those mentioned above, is drawn in a manuscript of *Kalilah wa Dimnah*, dated A.D. 1262 and reproduced by F. R. Martin, *op. cit.*, plate 40. On the peacocks of Turfan, cf. H. Lothar, *op. cit.*, p. 32.

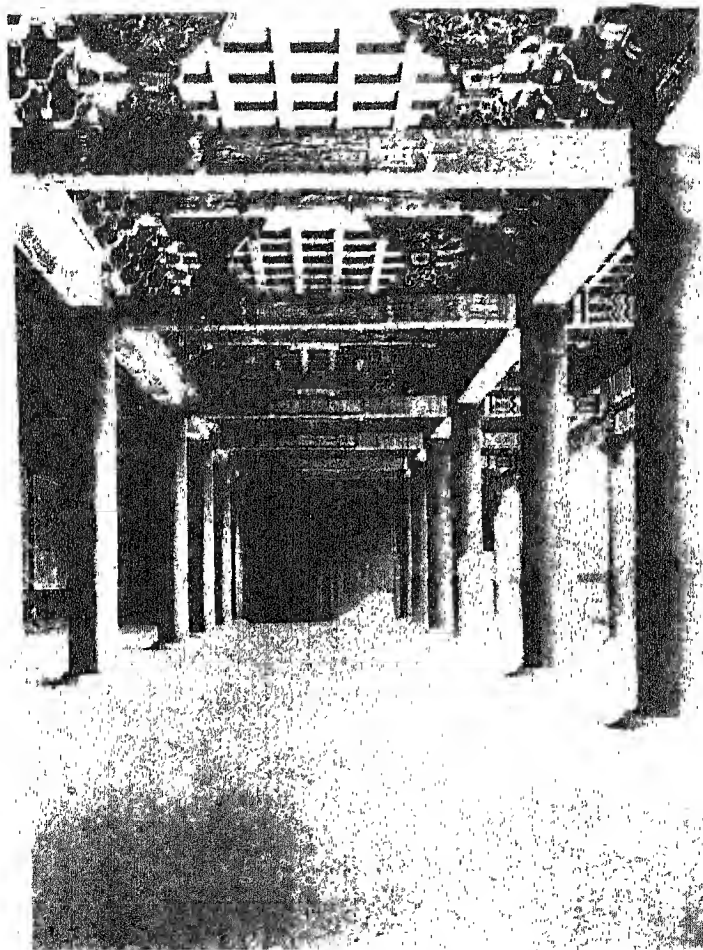
The Mongolian princesses wore peacock feathers on top of their hairdress, as described in the note to pl. 1. In China the ladies of the court replaced them with crane feathers, probably because of the rarity of peacock feathers in that country and the Chinese appreciation of the crane as a symbol of longevity and as an imperial bird.

ABBREVIATIONS USED IN FOOTNOTES

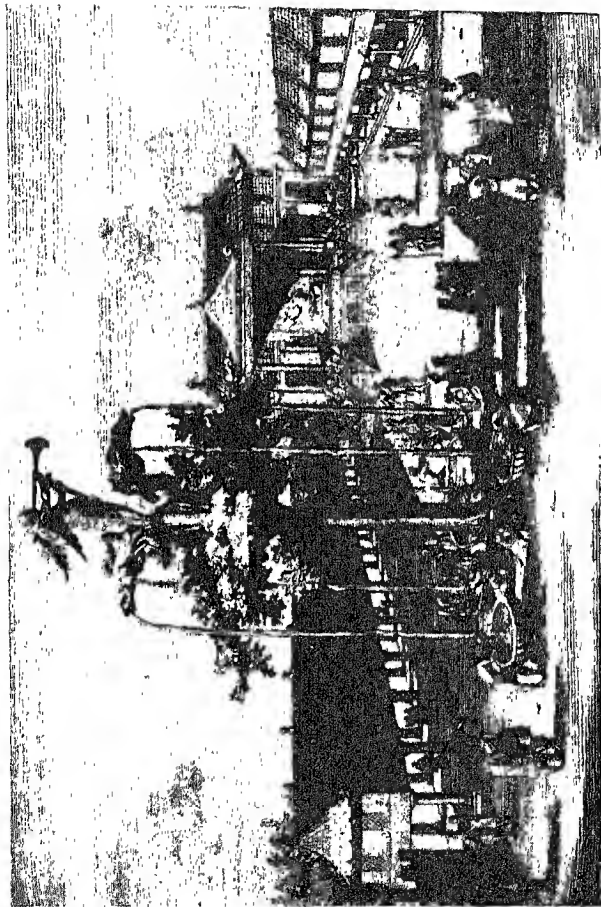
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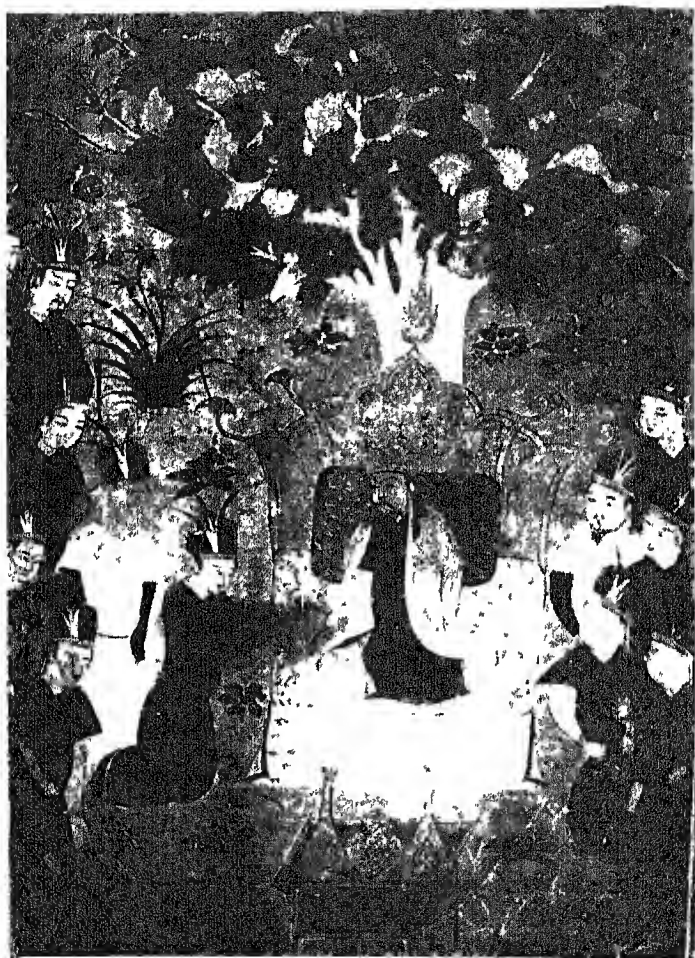
MANGU KHAN AND HIS FAMILY



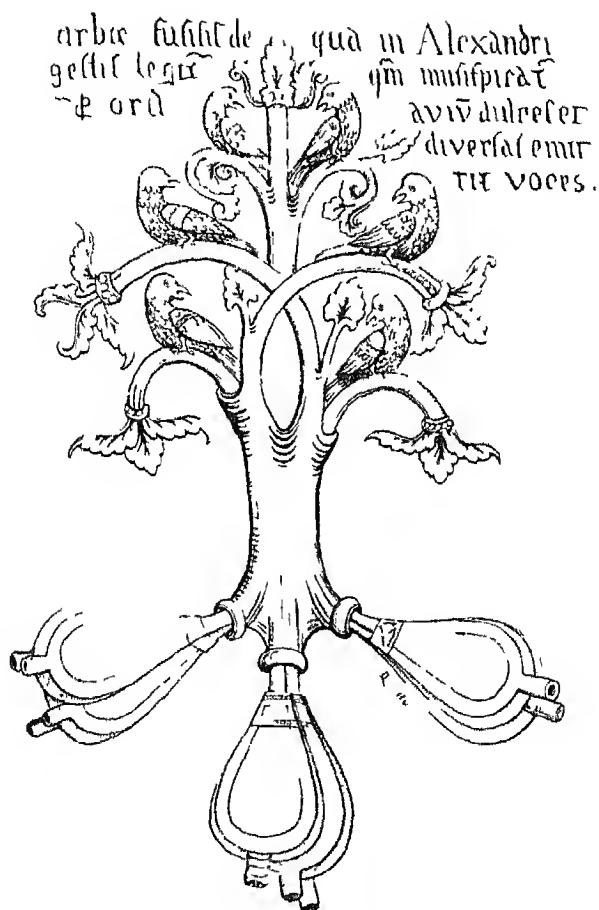
INTERIOR VIEW OF PEKING'S TAI HO MÊN



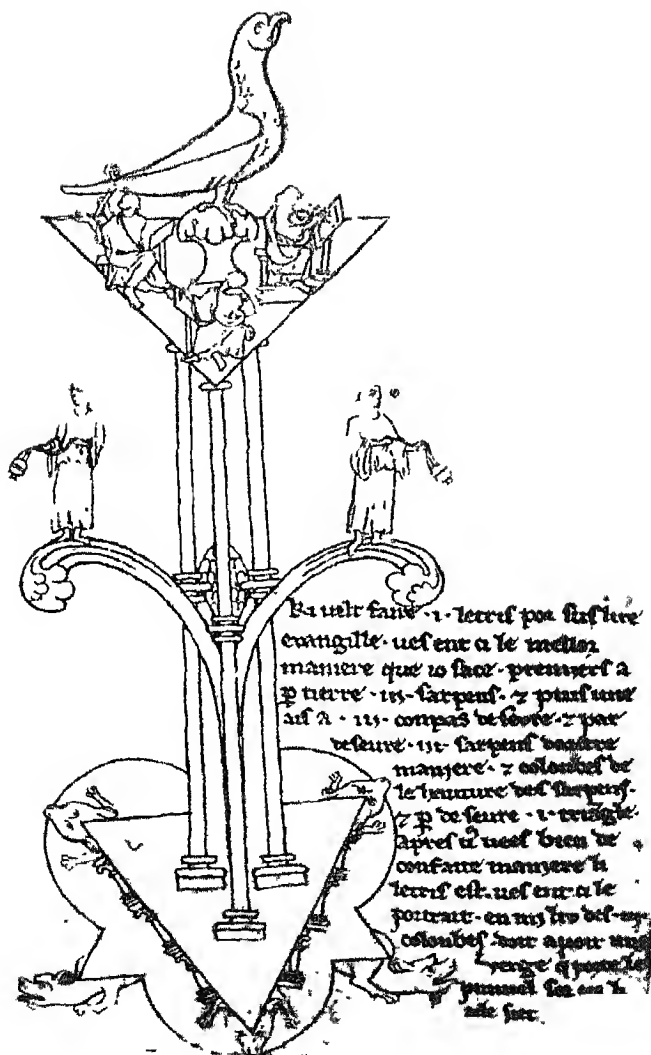
MANGU KHAN'S MAGIC FOUNTAIN IN BERGERON'S RECONSTRUCTION



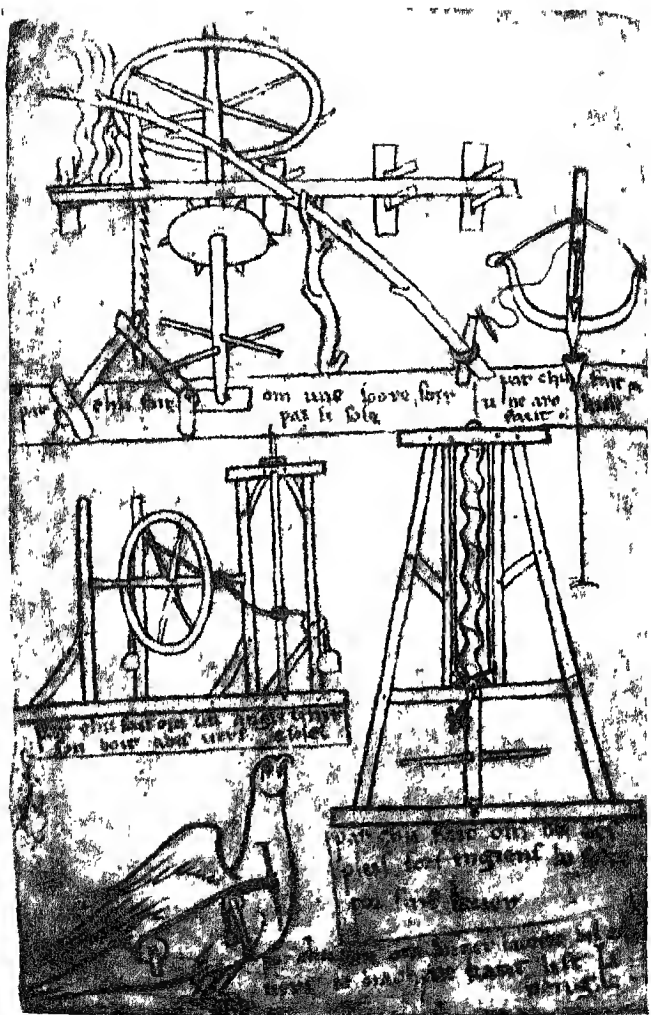
THE ENTHRONEMENT OF OGUDAI KHAN



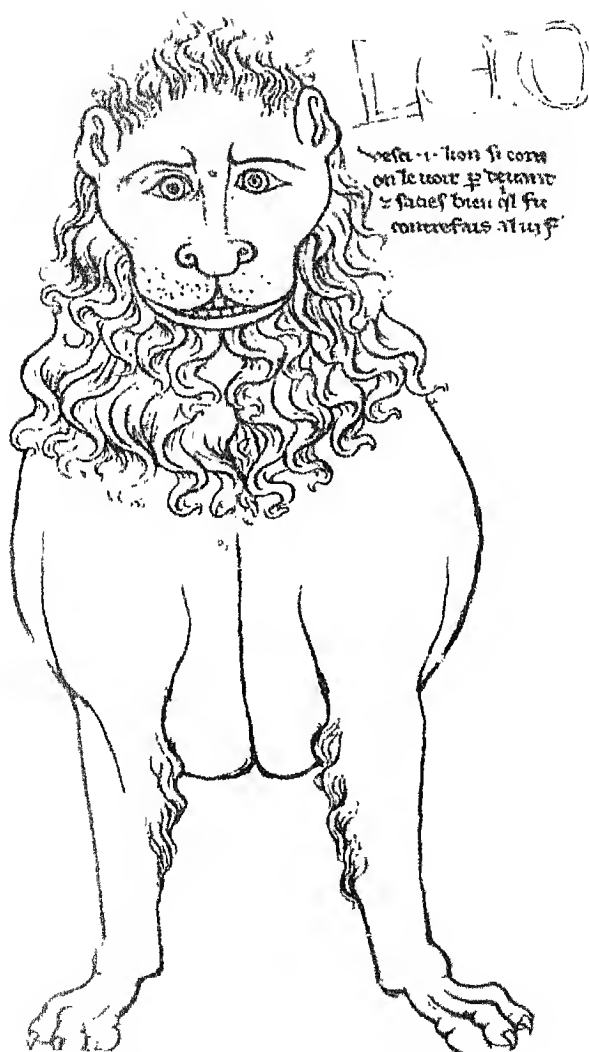
AN ORGAN IN FORM OF A TREE (12TH CENTURY)



VILLARD DE HONNLCOURT'S READING DISK



Mechanical Contrivances from Villard de Honnecourt's
"Livre de Portraiture."



VILLARD DE HONNECOURT'S LION



PRESTER JOHN—FLORENTINE WOODCUT, 1493



INDEX

- Aimery de Narbonne* 91
 Alamut 70n.
 Alans 8, 15.
 Alexandria 94
 Alexander the Great 71, 88, 89, 116.
 Alhambra 80
 Al-Jazari 93n., 95, 104, 113, 117f.
 Al-Moktader 90
 Altunian, G. 8n.
 Amida 95
 Amiens 86
 Angels 85, 86, 87, 113
 Anjou 2
Arbre Sec 71
 Archimedes 97
 Arik Buga 5, 7, 15, 60
 Aristotle 88
 Armenia and Armenians 14, 20, 21,
 31, 35n., 50, 76
 Arpád 2
 Asoka 115
 Assassins 13n., 70n.

 Bacchus Indicus 116
 Bagdad 13n., 40n., 90, 99, 104n.
bal 57
 Banū Musā 95
 Barbier de Montault 88n., 112n.
 Basil 1
 Batu Khan 2, 3n.
 Bela IV 2
 Belgrade 2
 Belleville 3
bodhidharma 68
 Bovenschen A. 76n.
 Belshazzar 55
 Bergeron, P. 64, 110
 Bible 26, 27, 28, 71
 Bleichsteiner, R. 8n.
 Blochet, E. 5n., 55n., etc. 112, 117,
 119

bocca 109
 Bodhisattva Avalokiteśvara 42
bogtak 109
 Boethius 87
 Boodberg, P. A. 15n., 66n., 78n.
 Boucher, L. 28
 Braun, J. 25n., 39n.
 Bretschneider, E. 9n. etc. 119
 Bridaban, L. B. 81n.
 Buddha and Buddhism 23n., 24, 42,
 50, 55, 68, 69, 71, 74, 82
 Bulgai 15, 16, 33, 34, 35
 Burekhardt, J. 94n.
 Byzance 10, 21, 22, 23, 48, 49, 89,
 90f., 94, 95, 104.

 Cārpine (Carpini), John of Pian
 del 3n., 6n., 8n., 17, 58, 60, 66,
 74, 75, 79, 109
 Carra de Vaux 95n., 96n.
 Carthage 01
 Carus, P. 101n.
 Cathay s. China
 Caucasus 8, 20
 Chalkondylas 8n.
 Ch'an-chou 28
 Chappuis, A. 61n., 90n., 95n.
 Chatley, H. 61n., 105n.
 Chaucer 18
 Chevalier, C. U. 88n.
 Chiang-su 28
 China and Chinese 10, 12, 13, 16,
 17, 24, 46, 47, 49, 50, 57, 60, 61,
 71, 72, 73, 80, 81, 82, 83, 84, 85,
 90, 99, 100, 102, 104, 105, 108,
 118
 Chrysotriclinium 89
 Cingai 15n.
 Cirina 1
 Clavijo 53, 98, 112
 Clockworks 86f.

- Comans 3
 Constantinople s. Byzance
 Coomaraswamy, A. 68n., 93n.
 Cordier, H. 38
 Cosmas 18
 Cota 25
 Cotota 54, 108
 Couplet, Ph. 28n.
 Crestien de Troyes 115
 Crossbow 13n., 105n., 113
 Crowns 103f.
 Crucifix 33, 35, 42
 Cyprus 21, 32

 Dalmatia 2
 Daniel 55n.
 Dante 78n., 87
 Dapper, O. 110
darasun 57
 Dati, G. 89n., 116
 Diar-Bekr 95
 Dolon-nor 100
Domus Aurea 94
 Dragons 82, 84, 86, 102, 109, 110,
 113
 Ebersolt, J. 89n., 104n.
 Egypt 117
 Eicke, G. 85n.
 Eickmann, W. 85n.
 Eisler, R. 75n.
 Enamel 106n., 118
 Enlart, E. 80n.
 Erdeni Tso 38
Escanor 91

Fa lan 106n.
 Falcon, Nic. 50n.
 Faral, E. 91n.
 Farcy, L. de 19n.
 Feathers 111, 118
 Feldhaus, F. M. 86n. etc., 112, 119
 Ferguson, J. C. 106n.
 Firdusi 71
 Fischer, O. 115.
 Florence 28n., 29

 Forke, A. 84n., 101n.
 Fountains 63ff., 79ff., 92ff., 101f.,
 112, 115.
 Frazer, T. 76
 France and French 1, 5, 6, 23, 30,
 41, 62, 98
 Frederick II 9, 96

 Gál, L. 3n.
 Gargoyles 81
 Genghis Khan 7, 8, 9, 10, 11, 13,
 14, 15, 27, 49, 51, 52, 59, 73, 74,
 76n., 77n., 108, 110, 111
 Georgians 14
 Gerbert 107
 Germany and Germans 5, 15n., 58n.
 Goodrich, L. Carrington 104n., 105n.
 Graillet, H. 79n.
 Granada 80
 Granet, M. 84n.
 Grapevine 57n.
 Grimm, J. 77n.
 Grousset, H. 29n., 51n., 84n.

 Haenisch, E. 72n., 74n.
 Hafiz 53
 Hahnloser, II. R. 3n. etc., 119
 Hauser, F. 95n., 104n.
 Haytun 50n., 76, 77n.
 Henri III, 9n.
 Heron of Alexandria 97, 104n.
 Honorius of Autun 86
 Hsian-fu 30n.
 Ilulagu 10, 13n.
 Hungary and Hungarians 2, 3, 14,
 15, 25

iascot 58, 59
 Ilkhans 74, 99, 100
 India 118
 Innocent IV 74
 Italy 2, 30

 Jerusalem 90
 John of Hildesheim 77

- Joinville 21n., 22, 43n.
 Juwainy 111
- Karakorum 1, 3n., 10, 13, 14, 16,
 17, 18, 20, 23, 24, 25, 28, 30, 31,
 33, 38, 40n., 46, 51, 52, 55, 57,
 60n., 68, 75, 82, 100, 102, 103,
 106n.
- karakosmos* 57, 58, 60.
 Kates, C. II. 41n., 48n.
 Kargumak-Jubur 73
 Keipingfu 100
 Keller, O. 79n.
 Kerchagan 17
 Khanbaliq (s. Peking) 23, 100
 Kin 17, 66
 Kipchak 3n., 10, 57
 Kircher, A. 110
 Koran 85
kosmos 57
K'o tow 40
 Ktesibius 97
 Kuan yin 42
 Kubilai 10, 15, 17, 23, 55, 60n., 75,
 82, 100, 101, 102, 105
kumiz 57
 Kuo Shou-Ching 105n.
kurultai 56
 Kuyuk Khan 18, 21, 50
- Lamaism 14, 31, 32, 71n., 82
 Lattimore, O. 70n.
 Laufer, B. 57n., 108
 Le Coq, A. von 81n.
 Lessing, F. 24n.
 Leveen, J. 117
 Lions 65ff., 79ff., 83ff., 86, 109, 114ff.
 Longjumeau, A. de 21, 43n.
 Lorraine 1, 2
 Lothar, H. 118
 Lusignan 22
- Ma Chiin 105n.
 Magnaura 89
 Mâle, E. 41n., 86n.
 Mamelucks 96
- Mandeville 50, 76, 88
 Mangu Khan 1, 3n., 5, 14, 15, 16,
 18, 19, 20, 23, 24, 25, 28, 32, 33,
 34, 35, 46, 48, 50, 51, 52, 54, 56,
 59, 60, 62, 63, 71, 74, 78, 83, 84,
 89, 90, 92, 100, 101, 108, 110
 Mariolatry 41
 Martin, F. R. 55n. etc., 119
 Maspéro, G. 84n.
 Matthew of Paris 9n.
 Mély, M. de 29n., 106n.
merdicas 102
 Metz 1
möngke tengri 51n., 75
 Moule, A. C. 28n. etc., 119
 Muftili 80
- Nasir ad-Din 60
 Nestorians 14, 16, 19n., 23, 24, 25,
 31, 32, 34, 35, 36, 37, 39, 40n.,
 71n.
 Nieuhof, J. 110
 Nonnus 116
 Nūr al-Dīn 117
- obra bestiarum* 115
 Odoric of Pordenone 70n., 102, 103,
 108, 109, 118
 Ogudai Khan 2, 10, 17, 47, 52, 74,
 108
 Ogul Gaimish 22, 23
 Omar Khayyām 53
 Omont, II. 50n.
 Onon River 73
 Organs 93n., 103, 104n., 112
- Paquette 1
 Paris 7, 28, 29, 30, 48
 Pauthier, G. 13n. etc., 119
 Peacocks 103, 104n., 117f.
 Pearls 18f., 109
 Pegolotti, F. Balducci 19n.
 Peking (s. Khanbaliq and Tai-du)
 17, 23, 48, 55n., 60, 100, 102,
 104, 105, 108, 109, 117, 118
 Pelka, O. 111

- Pelliot, P. 5n., 11n., 13n., 15n., 19n.,
 24n., 50n., 51n., 58n., 61n.
 Persia and Persians 11, 17, 47, 57,
 60, 73, 95, 97, 98, 99, 104, 105,
 108, 111
 Peter the Lombard 26
 Pfister, F. 89n.
 Philon of Byzance 97
 Philostrate 116
 Pine 102f.
 Poland 11
 Polo, Marco 9, 10, 11, 12, 13, 19,
 48, 49, 52, 57, 70, 80, 83, 97n.,
 100, 101, 102, 110, 118
 Porus 116
 Potthast, A. 87n.
 Prawdin, M. 15n.
 Prester John 89, 116
 Psalter 26
 Rashid ad-Din 5n., 73, 75, 77n.,
 102n., 108
 Ravenna 35n.
 Ricci, M. 61
Roman d'Alixandre 116
Roman d'Encas 91
 Rouen 3
 Rubruck, William of, 1 etc.
 Russia 1, 8, 11, 21
 Ruthenia and Ruthenians 1, 14, 18
 Saeki, P. Ya. 36n., 42n.
 St. Blasien 112
 St. Denis 30
 St. Louis 1, 5, 21, 25, 26, 27, 28,
 32, 43n.
 Salâh al-Din 117
 Samarkand 53, 98
 Sarnâth 115
 Sartach 26
 Schlauch, M. 91n.
 Schröder, E. 95n.
 Schultz, A., 92n., 112
 Seal 18, 50
 Senart, L. 68n.
 Serapeion 94
 Seroctan 5
 Serpents 65ff., 81, 83ff., 102
 Shamanism 32, 50
 Shangtu 23, 82, 100, 102n.
 Shigi Kutaku 15n.
Sira ordu 17
 Sirén, O. 41n. etc., 109ff.
 Soranzo, G. 5n., 21n., 50n.
 Söhring, O. 91n.
stüpa 24
 Sung 60n.
 Svetonius 94n.
 Sylvester II 87
 Tabriz 108
 Taidu (s. Peking) 55n., 100
 T'ai Ilo Mên 109
 T'ai Ho Tien 110
 Tamerlane s. Timur Lenk
 Ta Ming Tien 48, 101, 103, 110
 Taoism 31, 82
Tartar cloths 18, 19
 Temuchin 8
 Theophilus 90
 Throne of Salomon 94
 Tibet and Tibetans 40, 68, 85
 Tigers 83f.
 Timur 8
 Timur Lenk (Tamerlane) 9, 54, 55,
 57, 98, 99
titim 108
 Toynbee, P. 19n.
 Trees 63ff., 67ff., 72ff., 76ff., 88ff.,
 111f.
 Trigault, N. 61n.
 Tsungaria 5, 7
 Tucci, G. 71n.
 Tului Khan 5
 Turfan 118
 Turkestan 11, 13, 17, 46, 57, 70,
 97, 98n., 105
 Villard de Honnecourt 3, 13, 62, 63,
 81f., 83f., 86ff., 97, 112ff.
 Viollet-le-Duc 86n. etc.
 Vincent of Beauvais 109

-
- Vladimirtzov, P. Ya. 7n., 51n., 73n., 75n.
Voegelin, E. 6n.
Uigurs 15n., 24
Wang an 47
Waterbury, F. 80
Wellhausen, I. 70n.
Wiedemann, E. 95n., 104n., 113, 117
William of Blois 39n.
William of Rubruck s. Rubruck
Wine 57
Worcester 39
Wyngaert, A. van den In. etc., 119
Yang 85
yastuq 58n.
Yeh-hei-tieh-êrh 17n.
Yin 85
Yuan-ch'ao-pi-shi 72
Yuan she 17n., 40n., 73n.
Yule, H., 2n. etc., 119
Yunnan 80

